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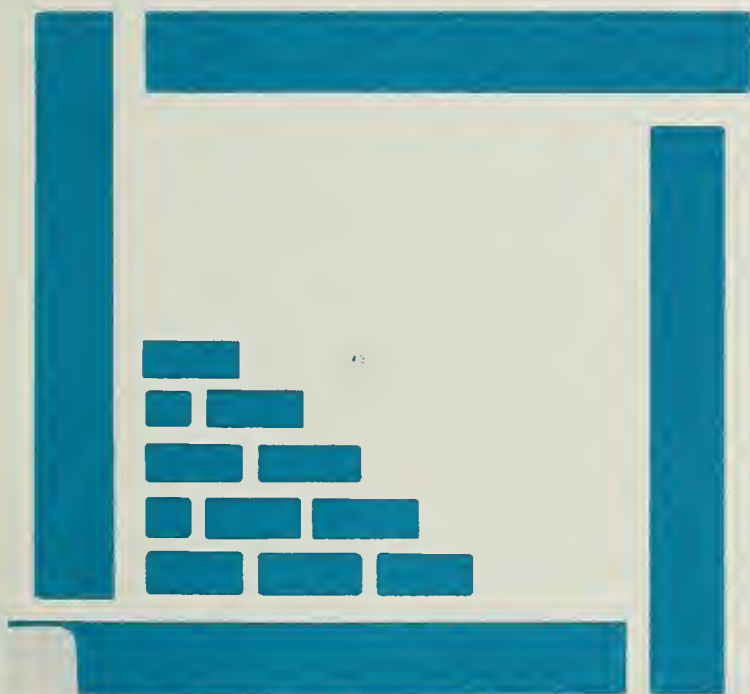
# Census of Construction Industries

CC87-I-19

INDUSTRY SERIES

## Concrete Work Special Trade Contractors

Industry 1771



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# ACKNOWLEDGMENTS

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Many persons participated in the various activities of the 1987 Census of Construction Industries.

The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Construction Statistics Division. **Barry A. Rappaport**, Assistant Division Chief for Industry Surveys, was responsible for the overall planning, management, and coordination of the census of construction industries. Planning and implementation were under the direction of **A. William Visnansky**, Chief, Census Operations Branch, with primary staff assistance by **Juliana Van Berkum**, **Barbara J. Hadden**, **Edward R. Glover**, **Susan L. Hostetter**, **Shirley M. Baker**, and **Carolyn J. Stone**. Under the direction of **Jesse Pollock**, **Edward K. Ricketts** and **Dennis K. Duke** developed the sampling plans and variance and estimation specifications.

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Geographic coding procedures and associated computer programs were developed by the staff of the Geography Division, **Robert W. Marx**, Chief.

The computer processing systems were developed and coordinated in the Economic Programming Division, **Barry M. Cohen**, Chief, and **H. Ray Dennis**, Assistant Chief. **Sarah W. Baumgardner**, Chief, Construction Census Branch, was responsible for the design and implementation of the computer systems. The computer programs were prepared under the supervision of **Barbara L. Lambert**, assisted by **Herbert Isham** of the Construction Statistics Division. **Linda M. Mersh** and **James Dallmann** assisted in establishing and maintaining the production control system.

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Special acknowledgment is also due the many businesses whose cooperation has contributed to the publication of these data.

If you have any questions concerning the statistics in this report, call (301) 763-7546.

# **1987**

# **Census of Construction Industries**

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## **Concrete Work Special Trade Contractors**

Industry 1771

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Issued January 1990



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# INTRODUCTION

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## PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

*Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.*

*Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.*

*State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.*

*Trade associations study trends in their own and competing industries, and keep their members informed of market changes.*

*Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.*

## AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the—

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

## AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

## WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan



areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

One important change involves receipts of contractors and builders. Prior to 1987, the Census of Construction Industries collected receipts as the primary measure of construction activity. For 1987, the census collected the "value of construction work done" to better measure actual construction activity done during the year. Differences between the two concepts occur when work is done in one year and payment received either from the prior or in the succeeding year. In addition, receipts do not include work a contractor performs for its own account and use.

## **HISTORICAL INFORMATION**

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in

other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

## **AVAILABILITY OF MORE FREQUENT ECONOMIC DATA**

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Construction Reports* (building permits, housing starts, and value of new construction put in place), *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

## **SOURCES FOR MORE INFORMATION**

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

## **CENSUS OF CONSTRUCTION INDUSTRIES—SCOPE AND CLASSIFICATION**

The 1987 Census of Construction Industries covers all employer establishments (establishments with payroll) primarily engaged in contract construction, construction on their own account for sale, or in subdividing real property



into lots as defined in the 1987 Standard Industrial Classification (SIC) Manual.<sup>1</sup> This industrial classification system has been developed by experts on classification in government and private industry under the guidance of the Office of Management and Budget and is in general use among government agencies and among organizations outside the government.

**Contract construction**—The SIC manual defines construction in three broad types of activity that follow:

1. **Building construction by general contractors or by operative builders**—General building contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building projects. Operative builders who build on their own account for sale are also included here. However, investment builders who build structures on their own account for rent are classified in Real Estate.
2. **Heavy construction general contractors**—Heavy construction general contractors are primarily engaged in the construction of highways, bridges, pipelines, sewers and water lines, marine construction, power, and petro-chemical plants and other nonbuilding construction projects. Special trade contractors are classified in heavy construction if they are specifically engaged in the following activities: grading for highway and airport runways; guardrail construction; installation of highway signs; asphalt and concrete construction of roads, highways, streets and public sidewalks; trenching, cable laying; conduit construction; underwater rock removal; pipeline wrapping; or land clearing and leveling.
3. **Construction by other special trade contractors**—These contractors include plumbers, painters, carpenters, electricians, brick layers, roofers, etc. For the most part, they perform their work at the site of construction, although they may also have shops where they perform work incidental to the job site.

General contractors in both the building and the heavy construction field usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project requiring special skills or equipment. Special trade contractors may work for general contractors, for other subcontractors, or may work directly for the owner of the property.

In addition to the industries classified in the SIC manual as Construction, this census also includes one industry

classified in the Real Estate area, SIC 6552, Land Subdividers and Developers, Except Cemeteries. These establishments are engaged in subdividing real property into lots and in developing it for sale on their own account.

Each establishment receiving a questionnaire was requested to report the percent of total dollar value of business done for each kind-of-business activity engaged in during 1987. This information was used for the computer assignment of appropriate industry classifications. During this work, various tests were also made using other data reported on the questionnaire. The proportion of construction work to total business was checked to verify that the establishment was primarily in construction. Also taken into consideration were the types of structures worked on during the year and the extent of work undertaken for other contractors.

Construction establishments often engage in various construction activities. It is necessary, however, to assign a single industry code to the establishment based on its major activity. Therefore, the statistics shown for an industry reflect not only the primary activity of the establishments in the industry, but also their secondary activities. The industry reports, however, do present data on the extent of secondary activities.

A revised edition of the SIC Manual was issued in 1987. Minor modifications were made to three industries in the construction sector: SIC 1611, Highway and Street Construction Contractors, Except Elevated Highways; SIC 1629, Heavy Construction Contractors, N.E.C.; and SIC 1771, Concrete Work Special Trade Contractors. The extent of these modifications are explained in the specific texts for those industries. "Bridge tables" are also included showing selected data tabulated using both the previous classification system and the 1987 revision.

## ESTABLISHMENT BASIS OF REPORTING

The census of construction industries is conducted on an establishment basis. A "construction establishment" is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such "establishment" activities include, but are not limited to estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each such establishment operated during all or any part of 1987. The census of construction industries figures represent a summary of records for individual establishments rather than for companies. The census tabulations, therefore, differ from those prepared on a company basis.

<sup>1</sup>Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.



If an establishment engaged in construction and one or more distinctly different lines of economic activity (wholesale or retail trade, service, manufacturing, mining, etc.) at the same place of business, it was requested to file a separate report appropriate to each activity, provided that the activity was of substantial size and separate records were maintained or substantially accurate estimates could be prepared.

If a separate establishment report could not be prepared for each activity, then a construction report was requested covering all activities of that establishment providing that the 1987 value of construction work exceeded the gross receipts from each of its other activities.

Construction businesses with no payroll during 1987 (nonemployers) were not required to file census reports. Tabulation of data for these businesses are based on administrative records and are shown only in U.S. summary publications and the geographic area reports series. Refer to the section on "Sample Design" for details. Foreign construction activities were not included in this census.

## **SAMPLE DESIGN, ESTIMATION PROCEDURES, AND RELIABILITY OF ESTIMATES**

The companies included in the 1987 Census of Construction Industries were identified as part of an operation common to all 1987 Economic Censuses. Construction companies were divided into employers (companies with payroll) and nonemployers (companies without payroll). Statistical information for the employers was obtained in the census by a survey which included all medium size and large employers and a sample of the smaller ones. Census reports were not required from the nonemployers. Statistics on them were obtained from administrative records of other agencies of the Federal Government.

### **Employer Companies**

**Developing the sampling frame for employer companies**—This operation started with obtaining a list of all construction companies in the active records of the Internal Revenue Service (IRS) which were subject to payment of Federal Insurance Contributions Act taxes. The basic source for this list has been the Internal Revenue Service Business Master File, a comprehensive list of companies engaged in business activities in the United States. The file contains the name, address, and form of ownership of each company and also indicates whether or not the company is subject to the FICA. Each company in this file is assigned a unique employer identification (EI) number which it uses in filing its various reports with the IRS. The Social Security Administration (SSA) maintains a similar list using the same identification numbers, which also contains information on the industrial classification of each company. The Bureau of the Census obtained both of these lists and combined them.

Under special arrangements which safeguarded the confidentiality of the information, the Bureau also obtained administrative records data on payrolls and receipts and added these data to the combined list. The list, thus created from the IRS-SSA information, was a list of employer companies. However, for the 1987 Economic Censuses the basic reporting unit is the "establishment." Therefore, steps were taken to identify the individual establishments of those companies which operate more than one place of business. The information for making this determination was obtained by means of the Company Organization Survey (COS), an annual canvass of all known multiestablishment companies and large single-establishment companies. Thus, the 1987 Economic Census list for single-establishment employer companies was obtained from the IRS-SSA, but the list of establishments of multiestablishment employer companies was obtained directly from those companies in the COS. Refer to the section on "Establishment Basis for Reporting" for details.

In general, the IRS-SSA list provided sufficient industrial classification data to assign a company to the proper economic census, but there were a number of companies for which this information was inadequate or unavailable. A special form, NC-9923, General Schedule, was mailed to all such companies, requesting information on the nature of the company's activities. From the information reported, the company was given an industrial classification code and assigned to the appropriate economic census. Since construction companies found in this way were identified only after the regular census mailing had taken place, they were treated as a supplement to the basic list.

**Selecting the employer sample**—The sample was designed to provide reliable State and metropolitan area estimates for each construction industry. It consisted of all construction establishments in multiestablishment companies, all single-establishment companies with estimated total employment of 20 employees or more, and a probability sample of single-establishment companies with estimated employment of fewer than 20 employees.

Supplementing the sample were construction companies identified from the NC-9923, General Schedule. Also affecting the sample were the misclassified companies; i.e., companies included in the samples of other trade areas which reported they were construction companies and companies originally classified in construction which reported they were not construction companies.

Of the 533,000 single-establishment employer companies initially classified as construction companies, 147,000 were included in the sample. All of the 13,000 establishments of multiestablishment companies were included in the sample. There was a net increase in the sample of 60,000 establishments resulting from establishments originally unclassified (receiving the NC-9923) or misclassified.

The probability sample of the smaller single-establishment companies was a stratified random sample. Strata were formed from all establishments with the same initial four-digit SIC code, in the same State, in the same metropolitan



area or in the balance of the State, and in the same size class based on estimated total employment. If the four-digit SIC code for an establishment was incomplete, the establishment was placed in a stratum for miscellaneous companies. Because they were small, all companies were included in the sample for the following three industries: SIC 1622, Bridge, Tunnel, and Elevated Highway Construction Contractors; SIC 1795, Wrecking and Demolition Work Special Trade Contractors; and SIC 1796, Installation or Erection of Building Equipment Special Trade Contractors.

#### Estimation procedures for 1987 and 1982 data—

Since all larger employer companies and some smaller ones were included in the census, sample estimation was required only for the universe of companies not selected with certainty. The published statistics are the totals of the estimates for the sampled companies and the aggregates for the certainty companies. All estimates for 1987 and 1982 published here are simple unbiased estimates of the form:

$$x'_c = \sum_{i=1}^{n_c} x_i / p_i$$

where:  $x'_c$  is the simple unbiased estimate of a characteristic for a publication cell.

$x_i$  is the reported value of a characteristic for an individual establishment in the publication cell.

$p_i$  is the selection probability of that firm.

$n_c$  is the number of firms in the sample for the cell.

Data for certain characteristics were reported as a percentage of the dollar value of business done. Before this formula was applied to those characteristics, it was necessary to convert the reported percentages into dollars.

**Reliability of employer statistics**—Since the estimates for employer establishments in these reports are based on the samples, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same forms and procedures. The sampling errors shown in the tables were estimated directly from the sample reports, using methods appropriate for the sample design and form of estimation used.

The relative standard error is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the relative standard error also partially reflects the effect of random errors of response and processing, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the

sample would differ from a complete census by less than the relative standard error. The chances are about 95 out of 100 that the difference is less than twice the relative standard error and about 99 out of 100 that it is less than 2-1/2 times the relative standard error. Individual estimates with large relative standard errors have been shown in the published tables. Any such estimates should be used with caution. The very large relative standard errors generally occur for the smaller estimates.

Relative standard errors have been calculated for all of the published statistics, although they are shown for each statistic only in the tables presenting detailed statistics. Other tables show relative standard errors only for certain characteristics because of lack of space.

As calculated for this report, the relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

A potential source of bias is in the imputation for those establishments that have not responded by the time of final publication. Data were estimated for establishments that did not report by that date, although selected establishments were contacted again to obtain as much information on the telephone as possible. Some publication cells in which more than 40 percent of the data were not reported have been suppressed.

## Nonemployer Companies

As described earlier, the information derived from the business income tax returns of all companies was matched to the census employer file on the basis of common identification numbers. Those business income tax returns which could not be matched, were further classified on the basis of several characteristics. Returns with characteristics consistent with companies without payroll were treated as nonemployers. The nonemployer construction companies were not required to file census reports.

For "number of establishments," each separate income tax return was assumed to be an establishment. "All business receipts" was based on receipts information reported on the tax return.

Since no sampling was involved in the nonemployer establishments, the statistics for nonemployers are not subject to sampling variability. However, these data are subject to an unknown amount of reporting and processing errors which could not be detected by the Census Bureau.



## CENSUS REPORT FORMS

Information for the 1987 Census of Construction Industries was obtained from employer establishments primarily through the use of twenty-four questionnaires, determined by industry classification and size. Standard forms and short forms were developed for each of the following SIC groups: 15, 16, 171, 172, 173, 174, 175, 176, 177, 178, and 179 and for the establishments classified in SIC 6552. Establishments with 50 or more employees all received the standard form. A sub-sample of establishments with fewer than 50 employees received short forms instead of the standard forms. The short forms covered only major items and omitted some of the detail found in the longer forms.

In reviewing and developing the questionnaires, comments and recommendations were elicited from construction trade associations and appropriate advisory groups. The Bureau surveyed several thousand firms representing all economic activities to gain insight into the way companies maintain records and to see whether new information could be collected.

## DATA PROCESSING

The 1987 census report forms were mailed out in December 1987. They were mailed from and returned to the Census Bureau's Data Preparation Division in Jeffersonville, Ind., where routine editing and coding of the report forms were also accomplished. Collection of these report forms was essentially completed in July 1988.

The returned reports underwent extensive processing. A preliminary edit done at the time of data entry identified obviously deficient reports and reports needing clarification. When necessary, these problems were resolved by further contact with the respondents. Next, the data were transmitted to Census Bureau headquarters near Washington, DC.

Data records, then, underwent a detailed computer review and analysis. The records containing significant problems were referred for further analytical review and, if necessary, contacts were made with the respondents. The computer performed most classification coding (such as industry coding, geographic coding, and size coding), and imputation for missing items or for reports not received in time for tabulation. The imputation was performed on an industry (or industry group)-State (or geographic group) basis using all available response and administrative data.

The data records were then tabulated on an industry basis. Industry totals were subjected to analytical review, and selected statistics were prepared for the preliminary reports. Corrections resulting from this review were made to the computer records and final tabulations were produced.

The review of a preliminary report for an industry often uncovered the need for corrections or revisions to the data for another industry for which a preliminary report had already been published. The final reports incorporate all

revisions and corrections made during the review of the preliminary reports and contain considerable more data than were published in those reports.

## GEOGRAPHIC CLASSIFICATION

Information for the 1987 Census of Construction Industries' final industry report series is classified on the basis of two types of geographic distributions: (1) physical location of the establishment, and (2) location of construction work. A separate code was assigned on each basis allowing us to present data by both physical locations of the establishment and location of construction work.

The geographic area reports series presents similar data by industry for each State (physical location of the establishment) and for selected MSA's, CMSA's and PMSA's.

## DUPLICATION IN VALUE OF CONSTRUCTION WORK

The aggregate of value of construction work reported by all construction establishments in each of the several industry, geographic area, or other groupings in this census, contains varying amounts of duplication, since the construction work of one firm may be subcontracted to other construction firms and also be included in the subcontractors' value of construction work. To avoid this duplication, a "net" value of construction work figure has been derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work.

Duplication in value of business between other construction and nonconstruction industries, results from the use of products of these other industries as input materials by construction establishments. "Value added," avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or areas. "Value added," is defined in the 1987 Census of Construction Industries as equal to dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for SIC 6552 and SIC 1531 where land receipts are significant, land receipts are also subtracted from dollar value of business done.

## SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Construction Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact and detailed specifications of the type and format of the data to be provided, should be directed to the Chief, Construction Statistics Division, Bureau of the Census, Washington, DC, 20233.



To discuss a special tabulation before submitting specifications, call 301-763-7546.

**COMPARABILITY OF CENSUS OF CONSTRUCTION INDUSTRIES DATA WITH OTHER DATA**

Data contained in the reports of the 1987 Census of Construction Industries are not the same as the data published in the Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity, whereas the construction census figures cover both new construction and maintenance and repair work done by establishments classified in the construction industry. Significant amounts of construction are done by establishments classified outside of construction (in real estate, manufacturing, utilities and communications, for example), both as "force account" construction and construction done for others. In addition, the value in place series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in the Census of Construction.

Data contained in the reports of the census of construction industries may also differ from industry data in "Employment and Earnings Statistics," published by the Bureau of Labor Statistics, and "Statistics of Income," published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

**ABBREVIATIONS AND SYMBOLS**

The following abbreviations and symbols are used in this publication:

- \* Sampling error exceeds 40 percent.
- \*\* Represents the sum of all employees during pay periods including 12th of March, May, August, and November, divided by 4.
- Represents zero.
- † Represents value of construction work less costs for construction work subcontracted to others. (See Duplication in Value of Construction Work.)
- †† Represents dollar value of business done less costs for construction work subcontracted to others, and costs for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from dollar value of business done. (See Duplication in Value of Construction Work.)
- (D) Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
- (NA) Not available.
- (S) Withheld because estimate did not meet publication standards on the basis of either the response rate, associated relative standard error, or a consistency review.
- (W) Greater than zero but less than 1 percent.
- (X) Not applicable.
- n.s.k. Not specified by kind.

# Users' Guide for Locating Statistics in This Report by Table Number

| Statistics  | For U.S.   | By State | By employment size | By size class of dollar value of business done | By type, class, ownership, kind of business, and location of construction <sup>1</sup> | By specialization in types of construction |
|---|------------|----------|--------------------|--|--|--|
| Assets and depreciation (gross book value):   |            |          |                    |  |  |  |
| Beginning of year—buildings, machinery and equipment.....                           | 3          |          |                    |  |  |  |
| End of year—total.....  | 1, 3       | 1        | 5                  | 6  |  |  |
| End of year—buildings, machinery and equipment.....                                 | 3          |          |                    |  |  |  |
| Depreciation charges during year—buildings, machinery and equipment.....            | 3          |          |                    |  |  |  |
| Capital expenditures:   |            |          |                    |  |  |  |
| Total capital expenditures.....   | 1, 3       | 1        | 5                  | 6  |  |  |
| New buildings—machinery and equipment.....  | 3          |          |                    |  |  |  |
| Used buildings—machinery and equipment.....   | 3          |          |                    |  |  |  |
| Communication services, costs for.....  | 2          |          |                    |  |  |  |
| Employees:  |            |          |                    |  |  |  |
| All employees—average number.....   | 1, 2       | 1        | 5                  | 6  |  | 8  |
| Construction workers—average number.....  | 1, 2, 9    | 1, 9     |                    |  |  |  |
| Other employees—average number.....   | 2          |          |                    |  |  |  |
| Employer costs for fringe benefits—legally required and voluntary expenditures..... | 2          |          |                    |  |  |  |
| Establishments—number in business during year.....                                  | 1, 2, 4, 9 | 1, 9     | 5                  | 6  |  | 8  |
| Hours—construction workers:   |            |          |                    |  |  |  |
| Total.....  | 1, 2, 9    | 1, 9     | 5                  | 6  |  |  |
| Quarterly.....  | 2, 9       | 9        |                    |  |  |  |
| Inventories.....  | 4          |          |                    |  |  |  |
| Materials, components, supplies, and fuels—costs for.....                           | 1, 2       | 1        | 5                  | 6  |  |  |
| Payroll:  |            |          |                    |  |  |  |
| First quarter, all employees.....   | 2          |          |                    |  |  |  |
| Annual:   |            |          |                    |  |  |  |
| All employees.....  | 1, 2       | 1        | 5                  | 6  |  | 8  |
| Construction workers.....   | 1, 2       | 1        |                    |  |  |  |
| Other employees.....  | 2          |          |                    |  |  |  |
| Power, fuels, and lubricants—costs for.....   | 2          |          |                    |  |  |  |
| Proprietors and working partners.....   | 2          |          |                    |  |  |  |
| Ratios, State.....  | 13         | 13       |                    |  |  |  |
| Value and receipts:   |            |          |                    |  |  |  |
| Dollar value of business done, total.....   | 2          |          | 5                  | 6  | 11   |  |
| Value of construction work, total.....  | 1, 2, 4    | 1        | 5                  | 6  | 2, 7, 10   | 8  |
| For work subcontracted in from others.....  | 2          |          |                    |  |  |  |
| Other business receipts and land receipts <sup>2</sup> .....                        | 2          |          |                    |  |  |  |
| Net value of construction work.....   | 1, 2       | 1        | 5                  | 6  |  | 8  |
| Value added.....  | 1, 2       | 1        | 5                  | 6  |  | 8  |
| Rental costs:   |            |          |                    |  |  |  |
| Total.....  | 1, 2       | 1        | 5                  | 6  |  |  |
| For machinery and equipment.....  | 2          |          |                    |  |  |  |
| For buildings.....  | 2          |          |                    |  |  |  |
| Repairs to buildings and other structures.....                                      | 2          |          |                    |  |  |  |
| Repairs to machinery and equipment.....   | 2          |          |                    |  |  |  |
| Selected industry ratios.....   | 12         |          |                    |  |  |  |
| Subcontract work to others, costs for.....  | 1, 2       | 1        | 5                  | 6  |  | 8  |

Note: Data for 1982 and earlier years are also available in some of these tables.

<sup>1</sup>Type—buildings, roads, etc. Class—new construction; additions, alterations, or reconstruction; or maintenance and repair work. Ownership—private or government owned.

<sup>2</sup>Land receipts are shown separately for SIC's 1531 and 6552 only.



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## Concrete Work Special Trade Contractors

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Statistics for Establishments Without Payroll appear in the U.S. Industry Summary Report.

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# SUMMARY OF FINDINGS

Establishments classified in this industry are primarily engaged in concrete work including portland cement and asphalt; the surfacing of concrete floors; applying seal to concrete or asphalt surfaces; constructing with gunite and stucco; and constructing private driveways and walks of all materials. For additional examples, refer to the 1987 Standard Industrial Classification (SIC) Manual published by the Office of Management and Budget, Executive Office of the President.

During 1987, the establishments with paid employees classified in this industry accounted for \$15.2 billion in total dollar value of business. Of this amount, \$15.1 billion were for the value of construction work. These establishments paid out \$5.2 billion for materials, components, and supplies, and \$1.2 billion for construction work subcontracted to others. Costs for selected power, fuels, and lubricants for this industry were \$324 million. Value added for 1987 was \$8.4 billion.

There were 23,422 establishments with total employment averaging 218,194 during the year. Total payroll for 1987 was \$4.2 billion. Total hours worked by construction workers during the year were 297 million hours.

Larger establishments with 20 employees or more, while representing only 9 percent of the total number of employer establishments in this industry accounted for 54 percent of all business done.

The content of this industry has been changed in the 1987 revision of the SIC Manual. Contractors primarily engaged in culvert or curb construction were previously

classified in Industry 1611, Highway and Street Construction Contractors, Except Elevated Highways, but are now included in this industry. Selected data were tabulated using both the previous classification system and the 1987 revision and are shown in the table below.

A "construction establishment" is defined as a relatively permanent office, or other place of business, where the usual business activities related to construction are conducted. A separate census report was required from each sampled establishment covering domestic operations. Separate reports were not, however, required for each project or construction site.

In 1987, the value of construction work was collected to better measure actual construction activity done during the year. Construction receipts, as reported in earlier censuses, may have included the value of work done before or after the calendar year and may have excluded the value of work in progress during the calendar year. Receipts may have also excluded work done by builders engaged in construction for sale on their own account or for their own use. All dollar values are shown in current dollars for the years specified and have not been adjusted for inflation. The data in this report are estimated from a sample survey and are subject to sampling variability as well as errors of response and nonreporting. The relative standard error shown in the tables is a measure of sampling variability. Descriptions of the sampling, estimating procedures, and data reliability are included in the Introduction.

## 1987 Data Showing the Derivation of the New Classification Based on the Old Classification

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Industry  | Number of establishments | All employees** | Payroll, all employees | Value of construction work | Net value of construction work† | Value added†† | Capital expenditures other than land |
|---|--------------------------|-----------------|------------------------|----------------------------|---------------------------------|---------------|--------------------------------------|
| New Industry 1771, Concrete Work . . . . .                | 23 422                   | 218 194         | 4 174 568              | 15 055 670                 | 13 853 510                      | 8 443 003     | 366 126                              |
| Old Industry 1611, Highway and Street Construction (pt.). | 251                      | 5 139           | 97 664                 | 371 425                    | 347 039                         | 220 036       | 8 945                                |
| Old Industry 1771, Concrete Work . . . . .                | 23 171                   | 213 054         | 4 076 903              | 14 684 245                 | 13 506 470                      | 8 222 967     | 357 180                              |



Figure 1. **Value of Construction Work by Type of Construction**  
(Percent)

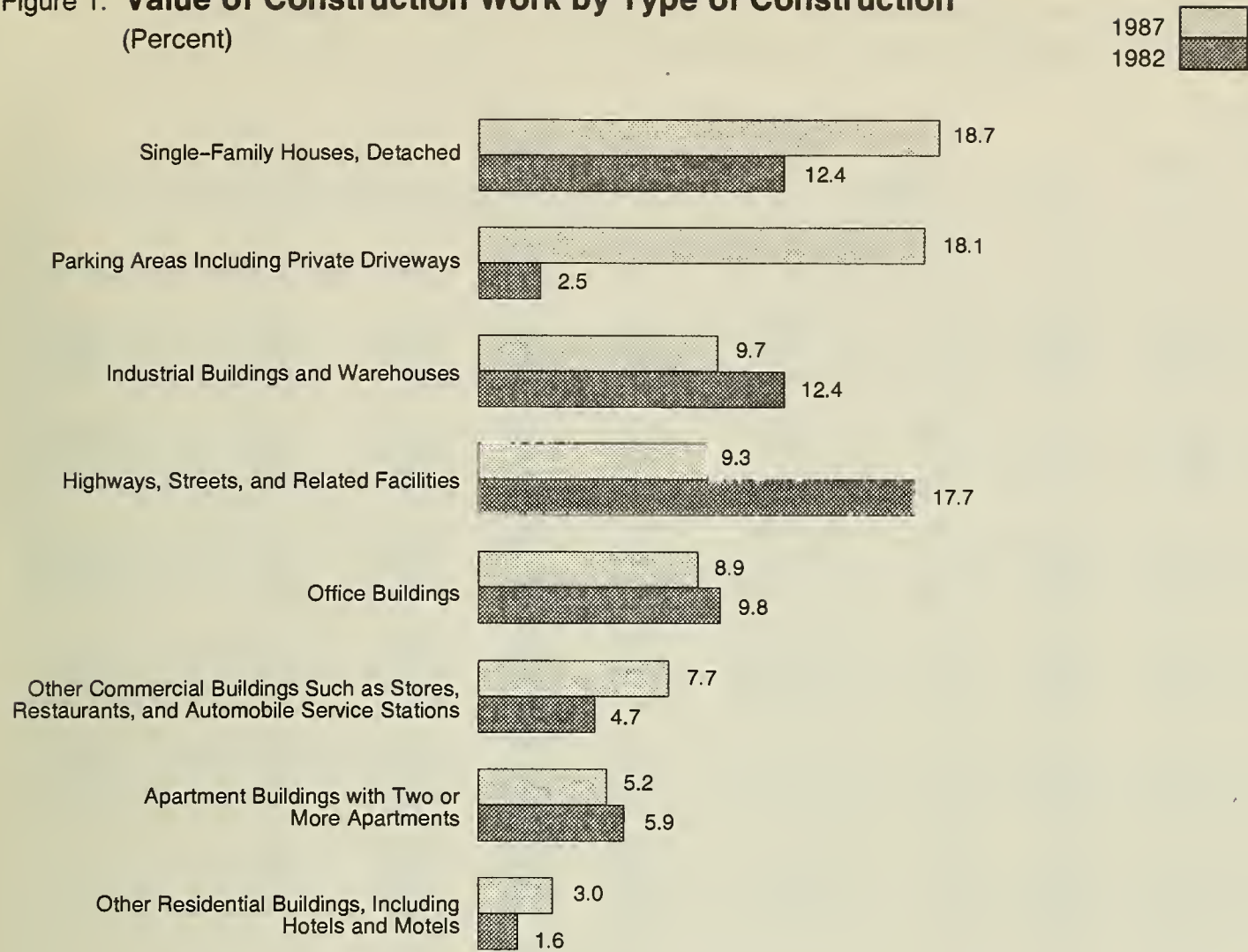
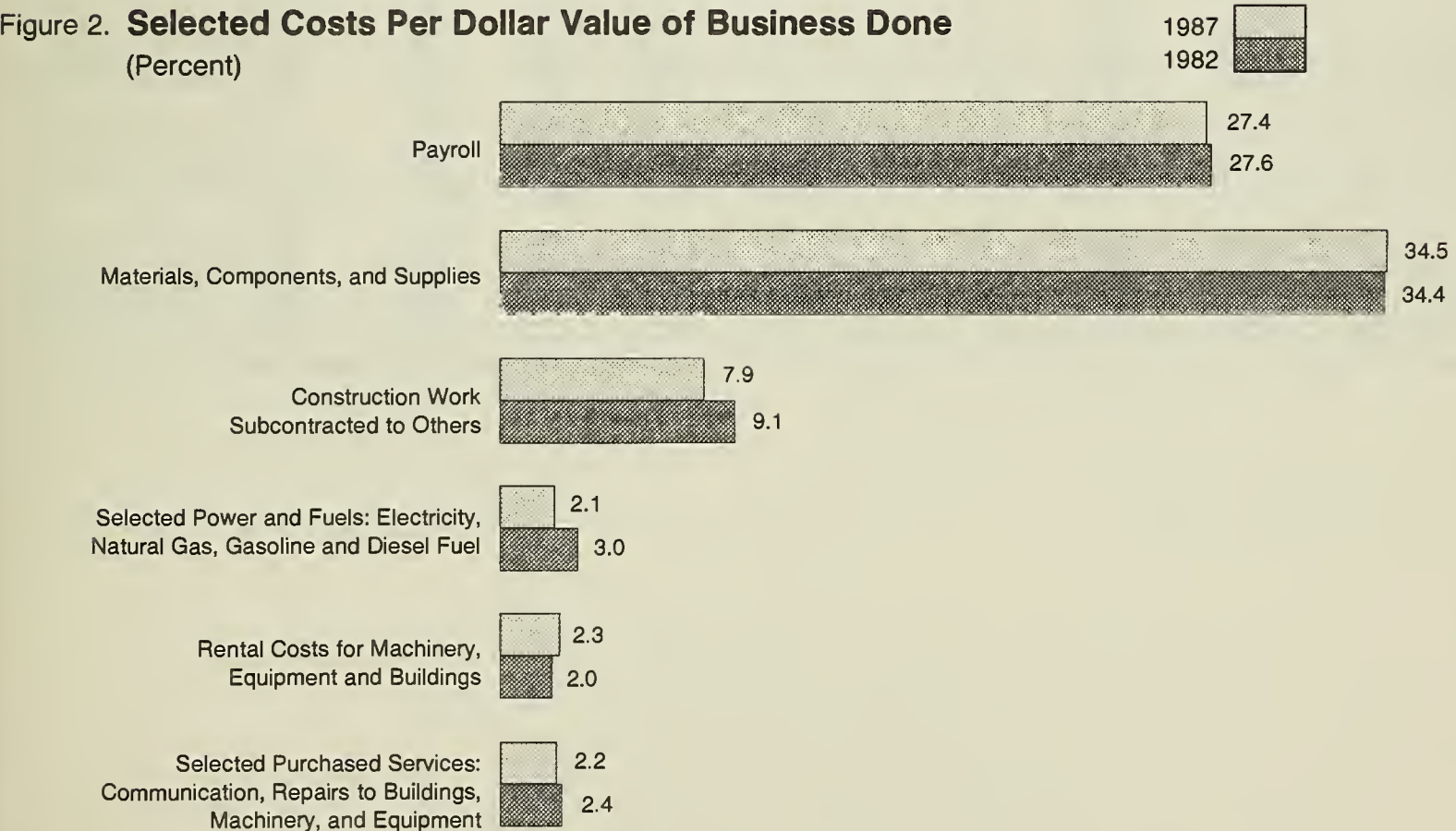


Figure 2. **Selected Costs Per Dollar Value of Business Done**  
(Percent)



**Table 1. General Statistics for Establishments With Payroll by State: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Location of establishment  | 1987                     |             |                      |               |                      |                                       |                            |                                 |
|----------------------------|--------------------------|-------------|----------------------|---------------|----------------------|---------------------------------------|----------------------------|---------------------------------|
|                            | Number of establishments | Employees** |                      | Payroll       |                      | Construction worker hours (thousands) | Value of construction work | Net value of construction work† |
|                            |                          | All         | Construction workers | All employees | Construction workers |                                       |                            |                                 |
|                            |                          |             |                      |               |                      |                                       |                            |                                 |
| A                          | B                        | C           | D                    | E             | F                    | G                                     | H                          |                                 |
| United States .....        | 23 422                   | 218 194     | 186 840              | 4 174 568     | 3 278 057            | 297 487                               | 15 055 670                 | 13 853 510                      |
| Alabama .....              | 244                      | 2 275       | 1 950                | 34 058        | 27 378               | 3 001                                 | 117 493                    | 109 656                         |
| Alaska .....               | 53                       | 264         | 216                  | 5 435         | 4 685                | 268                                   | 21 222                     | 19 595                          |
| Arizona .....              | 498                      | 6 984       | 5 992                | 133 434       | 105 982              | 9 950                                 | 449 490                    | 422 955                         |
| Arkansas .....             | 174                      | 1 255       | 1 122                | 14 792        | 11 989               | 1 466                                 | 61 421                     | 56 183                          |
| California .....           | 2 846                    | 33 363      | 28 823               | 763 780       | 608 205              | 44 275                                | 2 781 887                  | 2 503 883                       |
| Colorado .....             | 496                      | 4 116       | 3 491                | 68 305        | 52 977               | 5 095                                 | 216 616                    | 200 542                         |
| Connecticut .....          | 451                      | 2 970       | 2 439                | 66 927        | 51 099               | 4 408                                 | 234 193                    | 223 414                         |
| Delaware .....             | 56                       | 931         | 844                  | 19 738        | 16 460               | 1 343                                 | 80 113                     | 68 236                          |
| District of Columbia ..... | *11                      | 80          | 67                   | *1 440        | *1 087               | *112                                  | *6 827                     | 4 982                           |
| Florida .....              | 1 370                    | 15 711      | 13 642               | 239 525       | 190 055              | 21 599                                | 784 294                    | 723 499                         |
| Georgia .....              | 498                      | 5 805       | 4 944                | 94 367        | 72 292               | 7 491                                 | 349 706                    | 323 045                         |
| Hawaii .....               | 17                       | 192         | 162                  | 4 142         | 3 204                | 266                                   | 15 599                     | 13 413                          |
| Idaho .....                | 119                      | 385         | 344                  | 5 359         | 4 784                | 517                                   | 22 063                     | 21 225                          |
| Illinois .....             | 1 090                    | 12 599      | 10 909               | 295 466       | 235 161              | 17 147                                | 1 118 152                  | 998 816                         |
| Indiana .....              | 503                      | 3 715       | 3 201                | 62 687        | 49 785               | 4 881                                 | 233 190                    | 221 935                         |
| Iowa .....                 | 261                      | 2 319       | 1 954                | 38 015        | 29 575               | 3 179                                 | 159 876                    | 149 987                         |
| Kansas .....               | 298                      | 2 386       | 2 038                | 45 928        | 32 690               | 3 292                                 | 174 651                    | 161 974                         |
| Kentucky .....             | 308                      | 2 467       | 2 078                | 32 563        | 25 827               | 3 186                                 | 122 351                    | 113 038                         |
| Louisiana .....            | 94                       | 930         | 752                  | 11 787        | 8 644                | 1 033                                 | 50 788                     | 45 869                          |
| Maine .....                | 179                      | 1 086       | 931                  | 15 978        | 12 488               | 1 619                                 | 65 415                     | 64 128                          |
| Maryland .....             | 466                      | 8 417       | 7 266                | 167 821       | 129 544              | 13 289                                | 533 499                    | 501 632                         |
| Massachusetts .....        | 630                      | 4 442       | 3 757                | 94 058        | 75 648               | 6 547                                 | 320 081                    | 299 611                         |
| Michigan .....             | 989                      | 6 748       | 5 723                | 143 764       | 110 918              | 8 823                                 | 582 253                    | 550 206                         |
| Minnesota .....            | 549                      | 4 135       | 3 412                | 90 782        | 69 090               | 5 742                                 | 339 958                    | 317 465                         |
| Mississippi .....          | 125                      | 832         | 724                  | 7 928         | 6 285                | 798                                   | 28 282                     | 26 569                          |
| Missouri .....             | 694                      | 6 306       | 5 400                | 123 760       | 98 748               | 8 491                                 | 400 481                    | 381 483                         |
| Montana .....              | 90                       | 188         | 174                  | 1 935         | 1 663                | 309                                   | 8 167                      | 8 087                           |
| Nebraska .....             | 182                      | 1 427       | 1 238                | 17 090        | 13 304               | 1 875                                 | 66 191                     | 61 473                          |
| Nevada .....               | 98                       | 1 186       | 1 015                | 28 468        | 21 990               | 1 502                                 | 94 123                     | 86 844                          |
| New Hampshire .....        | 217                      | 1 485       | 1 266                | 25 946        | 20 129               | 2 151                                 | 90 859                     | 87 317                          |
| New Jersey .....           | 618                      | 6 635       | 5 752                | 155 950       | 122 569              | 9 236                                 | 528 415                    | 489 603                         |
| New Mexico .....           | 136                      | 1 339       | 1 148                | 20 621        | 16 994               | 1 662                                 | 74 546                     | 69 906                          |
| New York .....             | 1 304                    | 10 998      | 9 333                | 258 178       | 205 176              | 15 498                                | 952 856                    | 873 828                         |
| North Carolina .....       | 602                      | 4 631       | 3 947                | 63 000        | 47 720               | 6 356                                 | 247 456                    | 229 404                         |
| North Dakota .....         | 84                       | 272         | 220                  | 3 815         | 3 103                | 322                                   | 11 407                     | 10 881                          |
| Ohio .....                 | 1 099                    | 10 094      | 8 505                | 200 226       | 159 125              | 13 929                                | 732 113                    | 661 690                         |
| Oklahoma .....             | 188                      | 1 169       | 1 050                | 15 274        | 13 069               | 1 375                                 | 52 610                     | 49 497                          |
| Oregon .....               | 274                      | 1 508       | 1 277                | 24 210        | 20 344               | 1 782                                 | 86 577                     | 80 606                          |
| Pennsylvania .....         | 1 060                    | 7 878       | 6 739                | 142 905       | 111 377              | 10 834                                | 538 348                    | 507 891                         |
| Rhode Island .....         | 124                      | 716         | 578                  | 15 145        | 10 904               | 954                                   | 49 511                     | 46 697                          |
| South Carolina .....       | 219                      | 2 201       | 1 907                | 25 562        | 19 929               | 2 624                                 | 95 921                     | 88 691                          |
| South Dakota .....         | 105                      | 642         | 535                  | 9 284         | 7 435                | 895                                   | 40 870                     | 36 936                          |
| Tennessee .....            | 305                      | 2 285       | 1 977                | 33 783        | 25 981               | 3 234                                 | 138 877                    | 122 827                         |
| Texas .....                | 1 441                    | 15 107      | 12 768               | 244 528       | 184 241              | 20 699                                | 836 458                    | 751 191                         |
| Utah .....                 | 223                      | 1 479       | 1 279                | 22 949        | 19 406               | 2 043                                 | 78 415                     | 73 075                          |
| Vermont .....              | 91                       | 479         | 411                  | 7 410         | 5 971                | 707                                   | 33 392                     | 30 291                          |
| Virginia .....             | 626                      | 7 870       | 6 823                | 136 824       | 102 840              | 11 129                                | 492 301                    | 457 561                         |
| Washington .....           | 553                      | 3 348       | 2 857                | 58 447        | 45 034               | 4 229                                 | 224 176                    | 212 386                         |
| West Virginia .....        | 64                       | 634         | 553                  | 10 943        | 9 152                | 781                                   | 42 104                     | 37 087                          |
| Wisconsin .....            | 630                      | 3 662       | 3 095                | 66 462        | 53 330               | 5 267                                 | 257 993                    | 244 587                         |
| Wyoming .....              | 46                       | 224         | 189                  | 3 751         | 2 647                | 254                                   | 12 062                     | 11 790                          |

†In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.



| 1987—Con.     |  |  |   |                                       |  | 1982            |                              |               | Relative standard error of estimate (percent) for column— |    |    | Location of establishment |
|---------------|--|--|---|---------------------------------------|--|-----------------|------------------------------|---------------|---|----|----|---------------------------|
| Value added†† | Cost of materials, components, supplies, and fuels | Cost of construction work sub-contracted to others | Rental cost for machinery, equipment, and buildings | Capital expenditures, other than land | End-of-year gross book value of depreciable assets | All employees** | Total construction receipts¹ | Value added†† |   |    |    |                           |
| I             | J  | K  | L   | M                                     | N  | O               | P                            | Q             | B   | H  | M  |                           |
| 8 443 003     | 5 566 885  | 1 202 160  | 346 382   | 366 126                               | 2 516 592  | 157 241         | 8 207 000                    | 4 491 568     | 1   | 1  | 2  | U.S.                      |
| 69 076        | 41 311   | 7 837  | 2 390   | 2 976                                 | 23 923   | 1 523           | 62 201                       | 34 039        | 7   | 7  | 17 | AL                        |
| 12 340        | 7 444  | 1 626  | 729   | 120                                   | 4 632  | (D)             | 42 207                       | (D)           | 20  | 14 | 34 | AK                        |
| 236 607       | 188 906  | 26 534   | 10 073  | 8 797                                 | 73 062   | 3 751           | 197 348                      | 99 802        | 3   | 3  | 8  | AZ                        |
| 29 399        | 26 896   | *5 237   | 1 486   | *1 562                                | 10 609   | 813             | 36 139                       | 15 522        | 16  | 15 | 54 | AR                        |
| 1 518 217     | 1 003 015  | 278 004  | 78 963  | 38 652                                | 305 764  | 19 144          | 1 313 708                    | 738 846       | 2   | 1  | 4  | CA                        |
| 133 900       | 67 791   | 16 073   | 5 916   | 3 523                                 | 44 141   | 5 589           | 267 715                      | 160 349       | 5   | 4  | 18 | CO                        |
| 148 811       | 77 150   | 10 778   | 4 048   | 9 671                                 | 59 656   | 2 032           | 104 364                      | 61 905        | 5   | 6  | 15 | CT                        |
| 41 206        | 27 348   | 11 876   | 1 731   | 2 741                                 | 11 907   | 605             | 40 384                       | 22 158        | 10  | 8  | 28 | DE                        |
| 2 828         | 2 153  | (S)  | 44  | —                                     | (D)  | (D)             | (D)                          | (D)           | 39  | 37 | —  | DC                        |
| 455 722       | 276 876  | 60 795   | 20 435  | 24 644                                | 151 523  | 10 565          | 497 610                      | 271 726       | 3   | 3  | 9  | FL                        |
| 195 278       | 132 203  | 26 661   | 6 610   | 11 898                                | 69 324   | 3 118           | 122 317                      | 66 376        | 4   | 4  | 16 | GA                        |
| 8 476         | (D)  | 2 186  | 317   | 387                                   | (D)  | 611             | 44 094                       | 24 969        | 9   | 11 | 13 | HI                        |
| 12 178        | (D)  | 837  | 470   | *606                                  | 6 131  | 342             | 16 519                       | 7 773         | 8   | 6  | 44 | ID                        |
| 610 875       | 397 994  | 119 335  | 14 321  | 29 649                                | 163 165  | 7 980           | 456 751                      | 243 214       | 2   | 2  | 11 | IL                        |
| 131 763       | 93 882   | 11 255   | 3 353   | 9 294                                 | 54 331   | 2 077           | 90 937                       | 47 688        | 5   | 5  | 7  | IN                        |
| 84 333        | 68 039   | 9 888  | 3 042   | 3 063                                 | 30 516   | 1 411           | 54 732                       | 28 384        | 7   | 6  | 15 | IA                        |
| 101 367       | 61 444   | 12 677   | 4 678   | 4 729                                 | 31 872   | 2 378           | 89 308                       | 47 269        | 6   | 4  | 11 | KS                        |
| 68 648        | 47 149   | 9 313  | 2 446   | 3 566                                 | 28 294   | 1 869           | 92 658                       | 48 137        | 7   | 7  | 23 | KY                        |
| 27 000        | 20 478   | 4 919  | 1 781   | 788                                   | 6 069  | 1 971           | 91 767                       | 54 436        | 17  | 15 | 22 | LA                        |
| 35 026        | 29 132   | 1 286  | 655   | 2 029                                 | 16 679   | 392             | 15 174                       | 10 158        | 12  | 9  | 29 | ME                        |
| 293 854       | 212 804  | 31 867   | 13 547  | 16 988                                | 84 981   | 4 605           | 201 677                      | 106 846       | 2   | 2  | 13 | MD                        |
| 197 318       | 106 917  | 20 470   | 7 054   | 14 685                                | 77 570   | 2 519           | 125 897                      | 73 679        | 4   | 4  | 14 | MA                        |
| 332 759       | 223 285  | 32 046   | 7 878   | 17 734                                | 99 212   | 3 644           | 187 730                      | 104 168       | 4   | 3  | 9  | MI                        |
| 200 254       | 122 233  | 22 492   | 3 884   | 6 944                                 | 64 590   | 3 174           | 180 984                      | 94 313        | 5   | 6  | 14 | MN                        |
| 16 829        | 9 913  | 1 713  | 427   | 611                                   | *3 014   | 682             | 29 874                       | 16 814        | 15  | 14 | 33 | MS                        |
| 233 113       | 154 257  | 18 997   | 6 305   | 8 268                                 | 65 484   | 3 509           | 174 482                      | 98 401        | 4   | 3  | 9  | MO                        |
| 4 955         | 3 132  | *79  | 129   | 397                                   | *2 881   | 340             | 15 394                       | 7 659         | 21  | 27 | 39 | MT                        |
| 35 031        | 26 539   | 4 718  | 1 822   | 1 287                                 | 10 650   | 1 127           | 44 853                       | 23 405        | 18  | 10 | 32 | NE                        |
| 55 118        | 32 297   | 7 279  | 3 089   | 1 691                                 | 10 262   | 772             | 53 679                       | 30 949        | 7   | 4  | 22 | NV                        |
| 52 940        | 34 631   | 3 542  | 991   | 3 473                                 | 18 985   | 429             | 17 162                       | 10 728        | 7   | 7  | 19 | NH                        |
| 299 478       | 195 832  | 38 812   | 13 245  | 15 769                                | 82 787   | 4 629           | 256 091                      | 137 804       | 5   | 3  | 8  | NJ                        |
| 41 571        | 30 128   | 4 640  | 826   | 1 042                                 | 13 650   | 1 001           | 43 968                       | 23 589        | 9   | 9  | 17 | NM                        |
| 556 442       | 322 650  | 79 027   | 22 368  | 16 508                                | 118 586  | 9 767           | 582 705                      | 337 499       | 3   | 2  | 9  | NY                        |
| 137 446       | 94 919   | 18 052   | 4 504   | 6 522                                 | 42 453   | 3 076           | 115 421                      | 67 940        | 6   | 8  | 15 | NC                        |
| 6 402         | 5 408  | 526  | 201   | 527                                   | 3 053  | 479             | 17 565                       | 9 731         | 24  | 21 | 28 | ND                        |
| 402 440       | 269 952  | 70 422   | 13 298  | 19 210                                | 130 912  | 6 342           | 323 616                      | 177 148       | 3   | 2  | 8  | OH                        |
| 31 456        | 18 148   | 3 112  | 1 144   | 721                                   | 10 096   | 2 135           | 91 421                       | 48 694        | 11  | 9  | 29 | OK                        |
| 54 399        | 27 260   | 5 970  | 3 687   | 2 127                                 | 12 701   | 1 642           | 83 398                       | 46 366        | 9   | 7  | 23 | OR                        |
| 302 757       | 211 565  | 30 457   | 9 767   | 21 276                                | 119 307  | 6 102           | 322 471                      | 186 596       | 3   | 3  | 7  | PA                        |
| 34 543        | (D)  | 2 813  | 671   | 2 127                                 | 14 045   | 492             | 33 809                       | 13 976        | 8   | 9  | 19 | RI                        |
| 54 817        | 34 629   | 7 230  | 1 421   | 2 951                                 | 20 439   | 1 279           | 52 308                       | 24 739        | 12  | 11 | 27 | SC                        |
| 18 813        | 18 193   | 3 934  | 1 850   | 412                                   | 3 545  | 390             | 14 955                       | 6 400         | 15  | 17 | 27 | SD                        |
| 70 049        | 54 741   | 16 050   | 2 984   | 3 658                                 | 25 877   | 2 042           | 120 377                      | 54 471        | 8   | 6  | 25 | TN                        |
| 428 244       | 334 352  | 85 267   | 34 422  | 11 790                                | 165 374  | 18 577          | 888 771                      | 450 936       | 3   | 3  | 8  | TX                        |
| 48 728        | 24 703   | 5 340  | *2 443  | 1 978                                 | 27 051   | 1 290           | 68 663                       | 41 547        | 10  | 9  | 25 | UT                        |
| 16 126        | (D)  | 3 101  | 377   | 638                                   | 4 959  | 187             | (D)                          | 4 550         | 15  | 14 | 22 | VT                        |
| 269 927       | 192 888  | 34 739   | 12 399  | 13 207                                | 85 871   | 4 722           | 238 689                      | 131 819       | 4   | 4  | 10 | VA                        |
| 142 499       | 72 117   | 11 790   | 6 131   | 3 700                                 | 32 250   | 2 264           | 112 207                      | 69 008        | 6   | 5  | 16 | WA                        |
| 22 503        | (D)  | 5 016  | *1 096  | 810                                   | 6 060  | 426             | 19 518                       | 10 830        | 15  | 12 | 18 | WV                        |
| 151 330       | 99 588   | 13 406   | 4 736   | 9 975                                 | 59 831   | 2 371           | 114 485                      | 61 142        | 5   | 5  | 13 | WI                        |
| 7 794         | (D)  | *272   | 175   | 381                                   | 5 772  | 571             | 24 619                       | 16 116        | 20  | 16 | 40 | WY                        |

**Table 2. Detailed Statistics for Establishments With Payroll: 1987 and Earlier Census Years**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Item  | 1987       | 1982      | 1977      | 1972      | Relative standard error of estimate (percent) |      |      |      |
|---|------------|-----------|-----------|-----------|---|------|------|------|
|   |            |           |           |           | 1987  | 1982 | 1977 | 1972 |
| Number of establishments in business during year .....        | 23 422     | 19 986    | 16 974    | 17 772    | 1   | 1    | 2    | 2    |
| Proprietors and working partners .....                        | 7 166      | 8 708     | 11 616    | 12 394    | 3   | 2    | 3    | 3    |
| All employees** .....   | 218 194    | 157 241   | 118 116   | 147 924   | 1   | 1    | 1    | 2    |
| Construction workers:   |            |           |           |           |   |      |      |      |
| March .....   | 154 271    | 106 893   | 83 052    | 101 733   | 1   | 1    | 1    | 3    |
| May .....   | 196 024    | 143 276   | 114 935   | 139 368   | 1   | 1    | 1    | 2    |
| August .....  | 209 991    | 155 141   | 121 509   | 152 308   | 1   | 1    | 1    | 2    |
| November .....  | 187 138    | 136 673   | 108 448   | 138 173   | 1   | 1    | 1    | 3    |
| Average .....   | 186 840    | 137 832   | 107 085   | 135 041   | 1   | 1    | 1    | 2    |
| Other employees:  |            |           |           |           |   |      |      |      |
| March .....   | 31 120     | 19 135    | 10 011    | 12 069    | 1   | 1    | 1    | 3    |
| May .....   | 31 639     | (NA)      | (NA)      | (NA)      | 1   | (NA) | (NA) | (NA) |
| August .....  | 31 665     | (NA)      | (NA)      | (NA)      | 1   | (NA) | (NA) | (NA) |
| November .....  | 30 979     | (NA)      | (NA)      | (NA)      | 1   | (NA) | (NA) | (NA) |
| Average .....   | 31 353     | (NA)      | (NA)      | (NA)      | 1   | (NA) | (NA) | (NA) |
| Construction worker hours (thousands):                        |            |           |           |           |   |      |      |      |
| January to March .....  | 57 758     | 37 663    | (NA)      | (NA)      | 1   | 1    | (NA) | (NA) |
| April to June .....   | 78 451     | 52 099    | (NA)      | (NA)      | 1   | 1    | (NA) | (NA) |
| July to September .....                                       | 86 791     | 58 875    | (NA)      | (NA)      | 1   | 1    | (NA) | (NA) |
| October to December .....                                     | 74 486     | 50 907    | (NA)      | (NA)      | 1   | 1    | (NA) | (NA) |
| Total hours worked .....                                      | 297 487    | 199 545   | (NA)      | (NA)      | 1   | 1    | (NA) | (NA) |
| Payroll, all employees .....                                  | 4 174 568  | 2 309 814 | 1 209 879 | 1 197 014 | 1   | 1    | 1    | 2    |
| Payroll, construction workers .....                           | 3 278 057  | 1 901 567 | 1 042 622 | 1 045 342 | 1   | 1    | 1    | 2    |
| Payroll, other employees .....                                | 896 511    | 408 247   | 167 257   | 151 672   | 1   | 1    | 1    | 3    |
| First quarter payroll, all employees .....                    | 802 111    | 418 475   | 208 082   | (NA)      | 1   | 1    | 1    | (NA) |
| Employer costs for fringe benefits, all employees .....       | 928 542    | 424 267   | 242 954   | (NA)      | 1   | 1    | 1    | (NA) |
| Legally required expenditures .....                           | 655 522    | 328 610   | 141 330   | (NA)      | 1   | 1    | 1    | (NA) |
| Voluntary expenditures .....                                  | 273 019    | 95 657    | 101 624   | (NA)      | 1   | 1    | 1    | (NA) |
| Dollar value of business done .....                           | 15 212 049 | 8 376 774 | 4 151 856 | 3 699 141 | 1   | 1    | 1    | 2    |
| Value of construction work <sup>1</sup> .....                 | 15 055 670 | 8 207 000 | 4 097 293 | 3 650 338 | 1   | 1    | 1    | 2    |
| Value of construction work subcontracted in from others ..... | 9 045 744  | 4 525 480 | 2 712 237 | 1 960 805 | 1   | 1    | 1    | 2    |
| Land receipts <sup>2</sup> .....                              | (NA)       | (NA)      | (NA)      | (NA)      | (NA)  | (NA) | (NA) | (NA) |
| Other business receipts .....                                 | 156 378    | 169 774   | 54 564    | 48 803    | 3   | 1    | 4    | 5    |
| Net value of construction work† .....                         | 13 853 510 | 7 447 221 | 3 862 143 | 3 452 348 | 1   | 1    | 1    | 2    |
| Value added†† .....   | 8 443 003  | 4 491 568 | 2 227 880 | 2 141 289 | 1   | 1    | 1    | 2    |
| Selected costs .....  | 6 769 045  | 3 885 206 | 1 923 977 | 1 557 852 | 1   | 1    | 1    | 2    |
| Materials, components, and supplies <sup>3</sup> .....        | 5 242 978  | 2 878 175 | 1 595 677 | 1 359 862 | 1   | 1    | 1    | 2    |
| Construction work subcontracted to others .....               | 1 202 160  | 759 779   | 235 150   | 197 990   | 1   | 1    | 1    | 3    |
| Selected power, fuels, and lubricants .....                   | 323 906    | 247 251   | 93 150    | (NA)      | 1   | 1    | 1    | (NA) |
| Electricity .....   | 28 072     | 22 030    | 6 614     | (NA)      | 2   | 1    | 2    | (NA) |
| Natural gas .....   | 10 223     | 11 120    | 3 613     | (NA)      | 3   | 2    | 2    | (NA) |
| Gasoline and diesel fuel .....                                | 263 008    | 198 489   | 74 480    | (NA)      | 1   | 1    | 1    | (NA) |
| On highway use .....  | 215 662    | (NA)      | (NA)      | (NA)      | 1   | (NA) | (NA) | (NA) |
| Off highway use .....   | 47 345     | (NA)      | (NA)      | (NA)      | 2   | (NA) | (NA) | (NA) |
| Other, including lubricating oils and greases .....           | 22 602     | 15 610    | 8 445     | (NA)      | 2   | 3    | 2    | (NA) |
| Rental cost for machinery, equipment, and buildings .....     | 346 382    | 170 175   | 65 864    | (NA)      | 2   | 1    | 2    | (NA) |
| For machinery and equipment .....                             | 277 328    | 143 619   | 56 651    | 63 501    | 2   | 1    | 2    | 7    |
| For buildings .....   | 69 054     | 26 556    | 9 213     | (NA)      | 3   | 2    | 2    | (NA) |
| Selected purchased services .....                             | 332 871    | 200 254   | 104 935   | (NA)      | 1   | 1    | 9    | (NA) |
| Communication services .....                                  | 65 724     | 36 076    | 32 193    | (NA)      | 2   | 2    | 29   | (NA) |
| Repairs to buildings and other structures .....               | 14 478     | 7 285     | 3 380     | (NA)      | 4   | 4    | 3    | (NA) |
| Repairs to machinery and equipment .....                      | 252 667    | 156 892   | 69 362    | (NA)      | 2   | 1    | 2    | (NA) |
| Ownership of construction projects:                           |            |           |           |           |   |      |      |      |
| Value of construction work <sup>1</sup> .....                 | 15 055 670 | 8 207 000 | 4 097 293 | 3 650 338 | 1   | 1    | 1    | 2    |
| Government owned .....  | 2 265 359  | 1 965 071 | 373 780   | 770 749   | 2   | 2    | 2    | 3    |
| Federal .....   | 467 051    | (NA)      | (NA)      | (NA)      | 3   | (NA) | (NA) | (NA) |
| State and local .....   | 1 798 308  | (NA)      | (NA)      | (NA)      | 2   | (NA) | (NA) | (NA) |
| Privately owned .....   | 12 790 310 | 6 241 929 | 3 723 513 | 2 879 589 | 1   | 1    | 1    | 2    |

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

<sup>2</sup>Data were collected separately for establishments classified in SIC 1531, Operative Builders, and SIC 6552, Subdividers and Developers, Except Cemeteries. For all other industries, data are included in other business receipts.

<sup>3</sup>For 1972, includes data for power, fuels, and lubricants.



**Table 3. Assets, Capital Expenditures, and Depreciation for Establishments With Payroll: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Item   | 1987      | 1982      | Relative standard error of estimate<br>(percent) |      |
|--|-----------|-----------|--|------|
|  |           |           | 1987   | 1982 |
| <b>BUILDINGS AND OTHER STRUCTURES, MACHINERY, AND EQUIPMENT</b>          |           |           |  |      |
| Beginning-of-year gross book value of depreciable assets -----           | 2 258 782 | 1 864 325 | 2  | 1    |
| Capital expenditures, other than land -----                              | 366 126   | 177 477   | 2  | 2    |
| New -----  | 285 927   | 123 460   | 2  | 2    |
| Used -----   | 80 199    | 54 017    | 4  | 3    |
| Retirements and disposition of depreciable assets -----                  | 108 316   | 67 741    | 6  | 3    |
| End-of-year gross book value of depreciable assets -----                 | 2 516 592 | 1 974 061 | 2  | 1    |
| Depreciation charges during year -----                                   | 335 624   | 273 460   | 2  | 2    |
| <b>Buildings and other Structures, Additions, and Related Facilities</b> |           |           |  |      |
| Beginning-of-year gross book value of depreciable assets -----           | 319 574   | 214 657   | 4  | 2    |
| Capital expenditures, other than land -----                              | 32 314    | 14 269    | 6  | 6    |
| New buildings and other structures -----                                 | 22 751    | 10 154    | 8  | 5    |
| Used buildings and other structures -----                                | 9 563     | 4 115     | 10   | 13   |
| Retirements and disposition of depreciable assets -----                  | 11 234    | 6 218     | 13   | 5    |
| End-of-year gross book value of depreciable assets -----                 | 340 653   | 222 708   | 4  | 2    |
| Depreciation charges during year -----                                   | 29 804    | 19 650    | 6  | 3    |
| <b>Machinery and Equipment</b>   |           |           |  |      |
| Beginning-of-year gross book value of depreciable assets -----           | 1 939 208 | 1 649 668 | 2  | 1    |
| Capital expenditures, other than land -----                              | 333 812   | 163 208   | 2  | 2    |
| New machinery and equipment, including automobiles and trucks -----      | 263 176   | 113 306   | 2  | 2    |
| New automobiles and trucks, intended primarily for highway use -----     | 126 544   | 43 010    | 3  | 3    |
| Used machinery and equipment, including automobiles and trucks -----     | 70 635    | 49 902    | 4  | 3    |
| Retirements and disposition of depreciable assets -----                  | 97 081    | 61 523    | 6  | 3    |
| End-of-year gross book value of depreciable assets -----                 | 2 175 938 | 1 751 353 | 2  | 1    |
| Depreciation charges during year -----                                   | 305 820   | 253 809   | 2  | 2    |

**Table 4. Value of Inventories for Establishments With Payroll: 1987 and 1986**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Item                                      | Establishments with payroll | Relative standard error of estimate (percent) |
|---|-----------------------------|---|
| All establishments:                       |                             |   |
| Number .....                              | 23 422                      | 1   |
| Value of construction work .....          | 15 055 670                  | 1   |
| Establishments with inventories:          |                             |   |
| Number .....                              | 4 731                       | 3   |
| Value of construction work .....          | 4 923 583                   | 2   |
| Inventories <sup>1</sup> :                |                             |   |
| End of 1987, materials and supplies ..... | 88 747                      | 4   |
| End of 1986, materials and supplies ..... | 81 304                      | 5   |
| Establishments with no inventories:       |                             |   |
| Number .....                              | 15 296                      | 2   |
| Value of construction work .....          | 8 025 911                   | 1   |
| Establishments not reporting:             |                             |   |
| Number .....                              | 3 395                       | 4   |
| Value of construction work .....          | 2 106 176                   | 2   |

<sup>1</sup>Inventories at cost or market prior to any adjustment to correct to LIFO values.

**Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Selected statistics                                       | Total      | Establishments with an average of— |                  |                    |                    |                    |                      |                      |                      |                         |
|---|------------|------------------------------------|------------------|--------------------|--------------------|--------------------|----------------------|----------------------|----------------------|-------------------------|
|   |            | 1 to 4 employees                   | 5 to 9 employees | 10 to 19 employees | 20 to 49 employees | 50 to 99 employees | 100 to 249 employees | 250 to 499 employees | 500 to 999 employees | 1,000 employees or more |
| <b>1987</b>   |            |                                    |                  |                    |                    |                    |                      |                      |                      |                         |
| Number of establishments -----                            | 23 422     | (S)                                | 6 149            | 3 461              | 1 615              | 378                | 142                  | 19                   | 9                    | 1                       |
| All employees** -----                                     | 218 194    | (S)                                | 38 833           | 44 969             | 47 630             | 25 437             | 21 396               | 6 032                | 6 742                | (D)                     |
| Payroll, all employees -----                              | 4 174 568  | (S)                                | 588 099          | 791 492            | 1 026 777          | 621 628            | 510 400              | 145 335              | 134 951              | (D)                     |
| Construction worker hours (thousands) -----               | 297 487    | (S)                                | 48 834           | 58 843             | 65 308             | 37 203             | 32 140               | 9 217                | 10 589               | (D)                     |
| Dollar value of business done -----                       | 15 212 049 | (S)                                | 2 302 205        | 2 882 494          | 3 609 726          | 2 116 061          | 1 743 341            | 445 849              | 441 458              | (D)                     |
| Value of construction work <sup>1</sup> -----             | 15 055 670 | (S)                                | 2 278 812        | 2 849 297          | 3 549 510          | 2 099 879          | 1 735 326            | 879 760              | (D)                  | (D)                     |
| Net value of construction work† -----                     | 13 853 510 | (S)                                | 2 141 535        | 2 654 374          | 3 239 174          | 1 918 386          | 1 508 701            | 831 542              | (D)                  | (D)                     |
| Value added†† -----                                       | 8 443 003  | (S)                                | 1 266 297        | 1 647 163          | 1 970 800          | 1 163 867          | 944 376              | 265 008              | 246 405              | (D)                     |
| Cost of materials, components, supplies, and fuels -----  | 5 566 885  | (S)                                | 898 630          | 1 040 407          | 1 328 591          | 770 701            | 572 340              | 156 158              | 171 518              | (D)                     |
| Cost of construction work subcontracted to others -----   | 1 202 160  | (S)                                | 137 277          | 194 923            | 310 335            | 181 492            | 226 625              | 24 683               | 23 535               | (D)                     |
| Rental cost for machinery, equipment, and buildings ----- | 346 382    | (S)                                | 48 637           | 58 284             | 80 843             | 60 922             | 38 746               | 18 005               | 12 901               | (D)                     |
| Capital expenditures, other than land -----               | 366 126    | (S)                                | 78 030           | 75 790             | 96 818             | 41 320             | 20 023               | 3 048                | 8 979                | (D)                     |
| End-of-year gross book value of depreciable assets -----  | 2 516 592  | (S)                                | 478 482          | 572 342            | 587 870            | 291 203            | 139 831              | 46 907               | 42 684               | (D)                     |
| <b>1982</b>   |            |                                    |                  |                    |                    |                    |                      |                      |                      |                         |
| All employees** -----                                     | 157 241    | 25 766                             | 27 703           | 29 877             | 35 176             | 18 519             | 13 684               | 4 357                | 2 158                | -                       |
| Total construction receipts <sup>1</sup> -----            | 8 207 000  | 1 046 088                          | 1 212 965        | 1 521 660          | 2 085 921          | 1 197 532          | 819 253              | 257 662              | 65 919               | -                       |
| Value added†† -----                                       | 4 491 568  | 553 717                            | 650 090          | 814 750            | 1 122 364          | 684 015            | 486 365              | 139 209              | 41 057               | -                       |
| <b>1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)</b> |            |                                    |                  |                    |                    |                    |                      |                      |                      |                         |
| All employees** -----                                     | 1          | (S)                                | 3                | 2                  | 2                  | 1                  | (W)                  | (W)                  | (W)                  | (D)                     |
| Net value of construction work† -----                     | 1          | (S)                                | 3                | 2                  | 1                  | (W)                | (W)                  | (W)                  | (D)                  | (D)                     |
| Capital expenditures, other than land -----               | 2          | (S)                                | 7                | 5                  | 3                  | 2                  | (W)                  | 2                    | 23                   | (D)                     |

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

**Table 6. Selected Statistics by Size Class of the Dollar Value of Business Done for Establishments With Payroll: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Selected statistics                                       | Total      | Establishments with dollar value of business done |                      |                      |                        |                        |                        |                            |                            |                            |                      |
|---|------------|---|----------------------|----------------------|------------------------|------------------------|------------------------|----------------------------|----------------------------|----------------------------|----------------------|
|   |            | Less than \$25,000                                | \$25,000 to \$49,999 | \$50,000 to \$99,999 | \$100,000 to \$249,999 | \$250,000 to \$499,999 | \$500,000 to \$999,999 | \$1,000,000 to \$2,499,999 | \$2,500,000 to \$4,999,999 | \$5,000,000 to \$9,999,999 | \$10,000,000 or more |
| 1987  |            |   |                      |                      |                        |                        |                        |                            |                            |                            |                      |
| Number of establishments -----                            | 23 422     | (S)   | (S)                  | (S)                  | 6 986                  | 4 586                  | 2 967                  | 1 962                      | 673                        | 254                        | 161                  |
| All employees** -----                                     | 218 194    | (S)   | (S)                  | (S)                  | 27 190                 | 32 021                 | 32 607                 | 39 960                     | 26 647                     | 19 366                     | 28 137               |
| Payroll, all employees -----                              | 4 174 568  | (S)   | (S)                  | (S)                  | 326 163                | 452 774                | 572 782                | 841 204                    | 642 982                    | 481 268                    | 770 877              |
| Construction worker hours (thousands) -----               | 297 487    | (S)   | (S)                  | (S)                  | 34 536                 | 42 647                 | 42 398                 | 53 679                     | 38 767                     | 27 940                     | 45 263               |
| Dollar value of business done -----                       | 15 212 049 | (S)   | (S)                  | (S)                  | 1 149 493              | 1 599 892              | 2 086 935              | 3 014 586                  | 2 365 733                  | 1 710 586                  | 2 955 020            |
| Value of construction work <sup>1</sup> -----             | 15 055 670 | (S)   | (S)                  | (S)                  | 1 143 151              | 1 586 537              | 2 071 544              | 2 980 374                  | 2 320 521                  | 1 687 235                  | 2 938 966            |
| Net value of construction work† -----                     | 13 853 510 | (S)   | (S)                  | (S)                  | 1 094 054              | 1 511 160              | 1 946 666              | 2 763 365                  | 2 096 084                  | 1 536 198                  | 2 588 698            |
| Value added†† -----                                       | 8 443 003  | (S)   | (S)                  | (S)                  | 676 714                | 926 305                | 1 157 218              | 1 685 131                  | 1 296 324                  | 932 277                    | 1 568 897            |
| Cost of materials, components, supplies, and fuels -----  | 5 566 885  | (S)   | (S)                  | (S)                  | 423 682                | 598 209                | 804 838                | 1 112 446                  | 844 971                    | 627 272                    | 1 035 855            |
| Cost of construction work subcontracted to others -----   | 1 202 160  | (S)   | (S)                  | (S)                  | 49 096                 | 75 377                 | 124 878                | 217 009                    | 224 436                    | 151 037                    | 350 268              |
| Rental cost for machinery, equipment, and buildings ----- | 346 382    | (S)   | (S)                  | (S)                  | 19 872                 | 32 994                 | 43 467                 | 64 269                     | 55 359                     | 36 367                     | 89 282               |
| Capital expenditures, other than land -----               | 366 126    | (S)   | (S)                  | (S)                  | 31 311                 | 52 187                 | 63 073                 | 73 811                     | 60 359                     | 34 916                     | 42 573               |
| End-of-year gross book value of depreciable assets -----  | 2 516 592  | (S)   | (S)                  | (S)                  | 241 154                | 353 542                | 419 324                | 526 916                    | 395 317                    | 244 153                    | 261 639              |
| 1982  |            |   |                      |                      |                        |                        |                        |                            |                            |                            |                      |
| All employees** -----                                     | 157 241    | 3 356   | 4 553                | 10 034               | 26 485                 | 21 706                 | 21 462                 | 27 150                     | 17 050                     | 12 453                     | 12 990               |
| Total construction receipts <sup>1</sup> -----            | 8 207 000  | 30 948  | 85 477               | 256 407              | 869 410                | 920 286                | 1 119 742              | 1 649 917                  | 1 215 960                  | 959 142                    | 1 099 710            |
| Value added†† -----                                       | 4 491 568  | 16 840  | 47 454               | 141 348              | 481 315                | 507 308                | 590 878                | 890 706                    | 673 173                    | 555 183                    | 587 359              |
| 1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)        |            |   |                      |                      |                        |                        |                        |                            |                            |                            |                      |
| All employees** -----                                     | 1          | (S)   | (S)                  | (S)                  | 3                      | 3                      | 3                      | 2                          | 1                          | (W)                        | (W)                  |
| Net value of construction work† -----                     | 1          | (S)   | (S)                  | (S)                  | 3                      | 3                      | 3                      | 2                          | 2                          | (W)                        | (W)                  |
| Capital expenditures, other than land -----               | 2          | (S)   | (S)                  | (S)                  | 7                      | 7                      | 7                      | 5                          | 6                          | 3                          | 4                    |

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

<sup>1</sup>In earlier censuses construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.



**Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Type of construction  | Value of construction work <sup>1</sup> |                  |  |                        | Relative standard error of estimate (percent) for column— |      |      |      |
|---|---|------------------|--|------------------------|---|------|------|------|
|   | Total                                   | New construction | Additions, alterations, or reconstruction <sup>2</sup> | Maintenance and repair |   |      |      |      |
|   | A                                       | B                | C  | D                      | A   | B    | C    | D    |
| <b>1987</b>   |   |                  |  |                        |   |      |      |      |
| Value of construction work <sup>1</sup> .....   | 15 055 670                              | 11 376 824       | 1 586 290  | 1 442 529              | 1   | 1    | 2    | 2    |
| <b>Building construction</b> .....  | 9 318 387                               | 7 906 164        | 814 656  | 597 567                | 1   | 1    | 2    | 3    |
| Single-family houses .....  | 3 402 452                               | 2 963 395        | 259 197  | 179 860                | 1   | 2    | 5    | 5    |
| Single-family houses, detached .....  | 2 820 963                               | 2 437 056        | 231 851  | 152 055                | 2   | 2    | 5    | 5    |
| Single-family houses, attached .....  | 581 489                                 | 526 338          | 27 345   | 27 804                 | 3   | 3    | 6    | 7    |
| Apartment buildings with two or more apartments .....   | 779 680                                 | 696 792          | 32 837   | 50 050                 | 3   | 4    | 4    | 7    |
| Other residential buildings, including hotels and motels .....                                | 446 670                                 | 397 637          | 28 296   | 20 735                 | 2   | 2    | 7    | 10   |
| Hotels and motels .....   | 241 110                                 | 220 360          | 13 086   | 7 662                  | 3   | 3    | 7    | 10   |
| Other residential buildings, excluding hotels and motels .....                                | 205 560                                 | 177 276          | 15 210   | 13 073                 | 3   | 3    | 12   | 14   |
| Office buildings .....  | 1 340 326                               | 1 206 300        | 81 088   | 52 938                 | 2   | 2    | 4    | 4    |
| Other commercial buildings such as stores, restaurants, and automobile service stations ..... | 1 159 451                               | 954 890          | 127 518  | 77 042                 | 2   | 2    | 4    | 6    |
| Industrial buildings and warehouses .....   | 1 458 714                               | 1 174 108        | 147 931  | 136 674                | 2   | 2    | 4    | 4    |
| Industrial buildings .....  | 982 416                                 | 768 880          | 103 408  | 110 127                | 2   | 2    | 5    | 5    |
| Warehouses .....  | 476 297                                 | 405 227          | 44 523   | 26 546                 | 3   | 3    | 7    | 11   |
| Educational buildings .....   | 210 194                                 | 149 094          | 43 592   | 17 507                 | 4   | 5    | 6    | 7    |
| Hospitals and institutional buildings .....   | 241 398                                 | 167 485          | 59 646   | 14 266                 | 2   | 2    | 3    | 9    |
| Other nonresidential buildings .....  | 279 502                                 | 196 463          | 34 551   | 48 495                 | 5   | 5    | 14   | 11   |
| <b>Nonbuilding construction</b> .....   | 5 087 257                               | 3 470 661        | 771 634  | 844 961                | 1   | 1    | 2    | 2    |
| Highways, streets, and related facilities .....   | 1 399 526                               | 965 779          | 233 300  | 200 447                | 2   | 2    | 3    | 3    |
| Outdoor swimming pools .....  | 150 170                                 | 126 598          | 10 494   | 13 077                 | 7   | 7    | 11   | 9    |
| Parking areas including private driveways .....   | 2 729 423                               | 1 785 741        | 435 681  | 508 001                | 2   | 2    | 3    | 3    |
| Sewers, water mains, and related facilities .....   | 102 224                                 | 80 944           | 9 704  | 11 575                 | 8   | 8    | 16   | 14   |
| Heavy industrial facilities .....   | 101 590                                 | 77 282           | 7 280  | 17 027                 | 2   | 2    | 7    | 4    |
| Sewage treatment and water treatment plants .....   | 98 400                                  | 70 823           | 10 416   | 17 159                 | 15  | 19   | 10   | 24   |
| Other nonbuilding construction .....  | 505 924                                 | 363 494          | 64 759   | 77 675                 | 6   | 6    | 8    | 15   |
| <b>Construction work, n.s.k.</b> .....  | 650 026                                 | (NA)             | (NA)   | (NA)                   | 4   | (NA) | (NA) | (NA) |
| <b>1982</b>   |   |                  |  |                        |   |      |      |      |
| Value of construction work <sup>1</sup> .....   | 8 207 000                               | 6 767 979        | (NA)   | 1 439 020              | 1   | 1    | (NA) | 1    |
| <b>Building construction</b> .....  | 4 609 733                               | 4 043 026        | (NA)   | 566 707                | 1   | 1    | (NA) | 2    |
| Single-family houses .....  | 1 266 587                               | 1 081 135        | (NA)   | 185 452                | 2   | 2    | (NA) | 3    |
| Single-family houses, detached .....  | 1 021 243                               | 859 112          | (NA)   | 162 131                | 2   | 2    | (NA) | 4    |
| Single-family houses, attached .....  | 245 343                                 | 222 022          | (NA)   | 23 321                 | 3   | 3    | (NA) | 9    |
| Apartment buildings with two or more apartments .....   | 483 113                                 | 444 593          | (NA)   | 38 520                 | 2   | 2    | (NA) | 8    |
| Other residential buildings, including hotels and motels .....                                | 132 388                                 | 119 627          | (NA)   | 12 760                 | 2   | 3    | (NA) | 11   |
| Hotels and motels .....   | (NA)                                    | (NA)             | (NA)   | (NA)                   | (NA)  | (NA) | (NA) | (NA) |
| Other residential buildings, excluding hotels and motels .....                                | (NA)                                    | (NA)             | (NA)   | (NA)                   | (NA)  | (NA) | (NA) | (NA) |
| Office buildings .....  | 807 598                                 | 750 235          | (NA)   | 57 363                 | 1   | 1    | (NA) | 4    |
| Other commercial buildings such as stores, restaurants, and automobile service stations ..... | 384 126                                 | 322 470          | (NA)   | 61 656                 | 2   | 3    | (NA) | 5    |
| Industrial buildings and warehouses .....   | 1 017 615                               | 893 468          | (NA)   | 124 147                | 1   | 2    | (NA) | 4    |
| Industrial buildings .....  | 762 502                                 | 662 264          | (NA)   | 100 237                | 2   | 2    | (NA) | 4    |
| Warehouses .....  | 255 113                                 | 231 204          | (NA)   | 23 909                 | 2   | 3    | (NA) | 4    |
| Educational buildings .....   | 108 537                                 | 91 202           | (NA)   | 17 334                 | 4   | 3    | (NA) | 6    |
| Hospitals and institutional buildings .....   | 175 202                                 | 156 456          | (NA)   | 18 746                 | 2   | 2    | (NA) | 5    |
| Other nonresidential buildings .....  | 234 567                                 | 183 840          | (NA)   | 50 729                 | 5   | 5    | (NA) | 15   |
| <b>Nonbuilding construction</b> .....   | 2 385 888                               | 1 683 259        | (NA)   | 702 629                | 1   | 1    | (NA) | 1    |
| Highways, streets, and related facilities .....   | 1 454 700                               | 1 008 318        | (NA)   | 446 382                | 2   | 2    | (NA) | 2    |
| Outdoor swimming pools .....  | 17 593                                  | 16 926           | (NA)   | 666                    | 10  | 10   | (NA) | 14   |
| Parking areas including private driveways .....   | 207 290                                 | 131 276          | (NA)   | 76 014                 | 4   | 4    | (NA) | 4    |
| Bridges, tunnels, and elevated highways .....   | 122 272                                 | 90 408           | (NA)   | 31 863                 | 1   | 1    | (NA) | 1    |
| Sewers, water mains, and related facilities .....   | 108 932                                 | 88 385           | (NA)   | 20 546                 | 3   | 3    | (NA) | 7    |
| Sewers, sewer lines, and related facilities .....   | 74 142                                  | 60 770           | (NA)   | 13 372                 | 4   | 4    | (NA) | 6    |
| Water mains and related facilities .....  | 34 790                                  | 27 615           | (NA)   | 7 174                  | 7   | 6    | (NA) | 14   |
| Sewage treatment and water treatment plants .....   | 102 019                                 | 87 229           | (NA)   | 14 790                 | 4   | 5    | (NA) | 4    |
| Other nonbuilding construction .....  | 373 082                                 | 351 125          | (NA)   | 144 231                | 5   | 6    | (NA) | 7    |
| <b>Construction work, n.s.k.</b> .....  | 1 211 378                               | 1 041 694        | (NA)   | 169 683                | 2   | 2    | (NA) | 3    |

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

<sup>2</sup>In 1982, data for additions, alterations, or reconstruction were collected separately for SIC 1521, 1522, 1531, 1541, and 1542. For all other industries, data are included with "New construction."



**Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987**

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Item   | Number of establishments | All employees** | Payroll, all employees | Value of construction work |                      | Net value of construction work† | Value added†† | Cost of construction work sub-contracted to others | Relative standard error of estimate (percent) for column— |     |     |
|--|--------------------------|-----------------|------------------------|----------------------------|----------------------|---------------------------------|---------------|--|---|-----|-----|
|  |                          |                 |                        | For all types              | For specialized type |                                 |               |  | B   | D   | H   |
|  | A                        | B               | C                      | D                          | E                    | F                               | G             | H  |   |     |     |
| <b>All establishments</b> .....  | 23 422                   | 218 194         | 4 174 568              | 15 055 670                 | 9 116 309            | 13 853 510                      | 8 443 003     | 1 202 160  | 1   | 1   | 1   |
| Establishments not specializing by type .....  | 4 970                    | 65 576          | 1 338 780              | 4 500 080                  | (NA)                 | 4 130 937                       | 2 604 642     | 369 143  | 1   | 1   | 2   |
| Establishments specializing 51 percent or more .....   | 18 452                   | 152 617         | 2 835 787              | 10 555 589                 | 9 116 309            | 9 722 572                       | 5 838 361     | 833 017  | 2   | 1   | 2   |
| <b>SINGLE-FAMILY HOUSES, DETACHED</b>  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| <b>All establishments specializing in type</b> .....   | 6 156                    | 41 457          | 705 326                | 2 589 545                  | 2 216 977            | 2 434 435                       | 1 411 664     | 155 110  | 2   | 2   | 5   |
| Establishments with —  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization .....   | 2 591                    | 14 558          | 226 087                | 859 045                    | 859 045              | 799 933                         | 458 993       | 59 112   | 4   | 4   | 12  |
| 90 to 99 percent specialization .....  | 969                      | 8 855           | 153 390                | 547 650                    | 506 138              | 518 856                         | 300 377       | 28 793   | 4   | 4   | 6   |
| 80 to 89 percent specialization .....  | 991                      | 6 018           | 104 999                | 375 942                    | 308 857              | 365 154                         | 219 972       | 10 787   | 6   | 5   | 9   |
| 70 to 79 percent specialization .....  | 961                      | 6 551           | 113 563                | 443 612                    | 322 569              | 407 914                         | 229 983       | 35 698   | 5   | 4   | 6   |
| 60 to 69 percent specialization .....  | 507                      | 4 280           | 83 122                 | 286 105                    | 177 626              | 269 256                         | 162 615       | 16 849   | 6   | 5   | 7   |
| 51 to 59 percent specialization .....  | 135                      | 1 194           | 24 163                 | 77 188                     | 42 739               | 73 320                          | 39 722        | 3 868  | 12  | 9   | 11  |
| <b>SINGLE-FAMILY HOUSES, ATTACHED</b>  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| <b>All establishments specializing in type</b> .....   | 517                      | 4 184           | 75 315                 | 254 944                    | 204 475              | 242 496                         | 139 646       | 12 448   | 6   | 6   | 8   |
| Establishments with —  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization .....   | 257                      | 1 237           | 21 262                 | 50 728                     | 50 728               | 48 750                          | 32 782        | 1 977  | 14  | 12  | 28  |
| 90 to 99 percent specialization .....  | 45                       | 497             | 10 720                 | 42 563                     | 40 949               | 40 107                          | 17 672        | 2 456  | 16  | 15  | 15  |
| 80 to 89 percent specialization .....  | 36                       | 490             | 8 979                  | 37 621                     | 30 238               | 35 689                          | 20 115        | 1 932  | 12  | 8   | 8   |
| 70 to 79 percent specialization .....  | 103                      | 1 074           | 19 205                 | 65 784                     | 47 960               | 61 041                          | 37 527        | 4 742  | 13  | 13  | 13  |
| 60 to 69 percent specialization .....  | 59                       | 752             | 11 297                 | 45 617                     | 27 819               | 44 589                          | 24 387        | 1 028  | 12  | 19  | 26  |
| 51 to 59 percent specialization .....  | *16                      | 131             | 3 849                  | 12 629                     | 6 780                | 12 318                          | 7 160         | 310  | 28  | 22  | 19  |
| <b>APARTMENT BUILDINGS WITH TWO OR MORE APARTMENTS</b>   |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| <b>All establishments specializing in type</b> .....   | 313                      | 5 126           | 117 630                | 437 797                    | 379 518              | 357 138                         | 232 106       | 80 658   | 4   | 6   | 9   |
| Establishments with —  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization .....   | 80                       | 1 452           | 31 291                 | 128 006                    | 128 006              | 98 097                          | 58 742        | 29 909   | 6   | 18  | 23  |
| 90 to 99 percent specialization .....  | 71                       | 1 001           | 28 343                 | 106 873                    | 99 801               | 97 697                          | 75 589        | 9 176  | 10  | 7   | 21  |
| 80 to 89 percent specialization .....  | 29                       | 982             | 22 437                 | 97 514                     | 81 261               | (D)                             | 38 141        | (D)  | 9   | 4   | (D) |
| 70 to 79 percent specialization .....  | 78                       | 843             | 18 080                 | 58 449                     | 42 272               | 54 675                          | 33 273        | 3 774  | 13  | 9   | 4   |
| 60 to 69 percent specialization .....  | 33                       | 547             | 10 791                 | 31 895                     | 19 746               | 29 159                          | 17 972        | 2 736  | 13  | 7   | 2   |
| 51 to 59 percent specialization .....  | *20                      | 299             | 6 686                  | 15 058                     | 8 429                | (D)                             | 8 388         | (D)  | 21  | 19  | (D) |
| <b>OFFICE BUILDINGS</b>  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| <b>All establishments specializing in type</b> .....   | 401                      | 10 591          | 252 713                | 792 425                    | 603 578              | 709 842                         | 466 468       | 82 583   | 2   | 3   | 1   |
| Establishments with —  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization .....   | 115                      | 1 853           | 40 616                 | 150 501                    | 150 501              | 114 903                         | 78 516        | 35 598   | 8   | 3   | 1   |
| 90 to 99 percent specialization .....  | 101                      | 1 018           | 25 330                 | 98 817                     | 92 919               | 95 940                          | 69 101        | 2 877  | 8   | 21  | 17  |
| 80 to 89 percent specialization .....  | 17                       | 1 321           | 38 280                 | 102 028                    | 83 923               | (D)                             | 60 382        | (D)  | 2   | 1   | (D) |
| 70 to 79 percent specialization .....  | 27                       | 1 452           | 38 171                 | 100 052                    | 74 222               | (D)                             | 57 764        | (D)  | 6   | 3   | (D) |
| 60 to 69 percent specialization .....  | 101                      | 2 758           | 55 399                 | 174 821                    | 108 261              | 165 559                         | 99 203        | 9 261  | 4   | 3   | 1   |
| 51 to 59 percent specialization .....  | 37                       | 2 187           | 54 915                 | 166 205                    | 93 749               | 160 530                         | 101 501       | 5 675  | 4   | 2   | 5   |
| <b>OTHER COMMERCIAL BUILDINGS SUCH AS STORES, RESTAURANTS, AND AUTOMOBILE SERVICE STATIONS</b> |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| <b>All establishments specializing in type</b> .....   | 946                      | 9 293           | 187 227                | 660 570                    | 541 587              | 618 207                         | 394 837       | 42 362   | 4   | 3   | 6   |
| Establishments with —  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization .....   | 322                      | 3 747           | 72 419                 | 268 033                    | 268 033              | 248 695                         | 158 722       | 19 338   | 5   | 4   | 6   |
| 90 to 99 percent specialization .....  | 86                       | 576             | 9 439                  | 36 026                     | 33 004               | 33 876                          | 20 753        | 2 150  | 19  | 20  | 27  |
| 80 to 89 percent specialization .....  | 140                      | 929             | 17 853                 | 60 271                     | 50 258               | 53 426                          | 32 989        | 6 845  | 13  | 14  | 25  |
| 70 to 79 percent specialization .....  | 282                      | 1 904           | 34 931                 | 111 872                    | 81 380               | 107 274                         | 68 718        | 4 597  | 10  | 9   | 13  |
| 60 to 69 percent specialization .....  | 93                       | 1 293           | 29 052                 | 94 554                     | 58 056               | 87 342                          | 60 626        | 7 212  | 8   | 10  | 10  |
| 51 to 59 percent specialization .....  | 22                       | 842             | 23 531                 | 89 811                     | 50 853               | 87 592                          | 53 026        | 2 219  | 7   | 5   | 13  |
| <b>INDUSTRIAL BUILDINGS</b>  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| <b>All establishments specializing in type</b> .....   | 467                      | 6 516           | 134 538                | 453 536                    | 395 427              | 407 719                         | 251 688       | 45 816   | 5   | 3   | 4   |
| Establishments with —  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization .....   | 261                      | 3 102           | 65 216                 | 247 557                    | 247 557              | 221 215                         | 132 179       | 26 341   | 5   | 4   | 4   |
| 90 to 99 percent specialization .....  | 29                       | 652             | 11 383                 | 38 018                     | 34 974               | 34 095                          | 21 011        | 3 923  | 27  | 14  | 19  |
| 80 to 89 percent specialization .....  | 36                       | 416             | 8 928                  | 23 306                     | 18 712               | 21 889                          | 14 684        | 1 417  | 20  | 20  | 10  |
| 70 to 79 percent specialization .....  | 58                       | 1 136           | 23 638                 | 68 276                     | 48 335               | 60 977                          | 39 792        | 7 299  | 11  | 9   | 7   |
| 60 to 69 percent specialization .....  | 54                       | 875             | 18 747                 | 58 098                     | 36 010               | 53 969                          | 33 108        | 4 128  | 13  | 11  | 15  |
| 51 to 59 percent specialization .....  | 27                       | 334             | 6 624                  | 18 279                     | 9 836                | 15 573                          | 10 912        | 2 706  | 24  | 22  | 26  |
| <b>WAREHOUSES</b>  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| <b>All establishments specializing in type</b> .....   | 227                      | 2 524           | 46 429                 | 139 780                    | 108 488              | 128 074                         | 79 874        | 11 705   | 8   | 7   | 11  |
| Establishments with —  |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization .....   | 24                       | 443             | 8 169                  | 27 932                     | 27 932               | 25 461                          | 14 980        | 2 471  | 15  | 17  | 26  |
| 90 to 99 percent specialization .....  | 9                        | 254             | 4 442                  | 13 614                     | 12 622               | (D)                             | 7 297         | (D)  | 23  | 7   | (D) |
| 80 to 89 percent specialization .....  | 42                       | 422             | 7 359                  | 20 099                     | 16 727               | 19 031                          | 11 123        | 1 068  | 24  | 20  | 30  |
| 70 to 79 percent specialization .....  | 86                       | 601             | 10 433                 | 30 975                     | 22 080               | 30 218                          | 16 002        | 756  | 15  | 13  | 14  |
| 60 to 69 percent specialization .....  | 61                       | 752             | 14 334                 | 43 561                     | 27 247               | 39 003                          | 28 021        | 4 558  | 16  | 16  | 23  |
| 51 to 59 percent specialization .....  | 3                        | 51              | 1 692                  | 3 597                      | 1 878                | (D)                             | 2 449         | (D)  | (W)   | (W) | (D) |



Table 8. **Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987—Con.**

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Item  | Number of establishments | All employees** | Payroll, all employees | Value of construction work |                      | Net value of construction work† | Value added†† | Cost of construction work sub-contracted to others | Relative standard error of estimate (percent) for column— |     |     |
|---|--------------------------|-----------------|------------------------|----------------------------|----------------------|---------------------------------|---------------|--|---|-----|-----|
|   |                          |                 |                        | For all types              | For specialized type |                                 |               |  | B   | D   | H   |
|   |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| A   | B                        | C               | D                      | E                          | F                    | G                               | H             | B  | D   | H   |     |
| HIGHWAYS, STREETS, AND RELATED FACILITIES     |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| All establishments specializing in type ----- | 882                      | 13 564          | 277 661                | 1 010 335                  | 907 210              | 920 476                         | 546 037       | 89 859   | 3   | 3   | 5   |
| Establishments with —                         |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization -----              | 515                      | 7 403           | 151 240                | 551 879                    | 551 879              | 506 625                         | 299 393       | 45 254   | 4   | 4   | 8   |
| 90 to 99 percent specialization -----         | 157                      | 1 882           | 39 575                 | 143 062                    | 134 265              | 134 544                         | 80 756        | 8 517  | 8   | 6   | 8   |
| 80 to 89 percent specialization -----         | 76                       | 1 871           | 31 741                 | 109 366                    | 91 474               | 98 824                          | 53 880        | 10 541   | 8   | 7   | 10  |
| 70 to 79 percent specialization -----         | 49                       | 959             | 19 382                 | 73 785                     | 54 111               | 64 690                          | 39 219        | 9 094  | 8   | 6   | 9   |
| 60 to 69 percent specialization -----         | 43                       | 677             | 16 059                 | 53 693                     | 33 187               | 50 298                          | 31 684        | 3 395  | 14  | 13  | 33  |
| 51 to 59 percent specialization -----         | 39                       | 769             | 19 663                 | 78 549                     | 42 292               | 65 493                          | 41 103        | 13 055   | 10  | 6   | 5   |
| OUTDOOR SWIMMING POOLS                        |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| All establishments specializing in type ----- | 287                      | 2 437           | 42 141                 | 132 394                    | 124 402              | 129 830                         | 80 012        | 2 564  | 10  | 8   | 22  |
| Establishments with —                         |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization -----              | 174                      | 1 450           | 27 188                 | 85 025                     | 85 025               | 83 899                          | 51 331        | 1 126  | 11  | 11  | 17  |
| 90 to 99 percent specialization -----         | 63                       | 498             | 8 138                  | 26 450                     | 24 761               | 25 825                          | 17 180        | 625  | 19  | 9   | 14  |
| 80 to 89 percent specialization -----         | *15                      | *156            | *2 291                 | *8 160                     | *5 211               | *5 885                          | *3 656        | *275   | 51  | 51  | 61  |
| 70 to 79 percent specialization -----         | 25                       | 167             | 1 866                  | 4 800                      | 3 588                | (D)                             | 1 967         | (D)  | 38  | 33  | (D) |
| 60 to 69 percent specialization -----         | 2                        | (D)             | (D)                    | (D)                        | (D)                  | (D)                             | (D)           | (D)  | (D)   | (D) | (D) |
| 51 to 59 percent specialization -----         | 8                        | (S)             | (S)                    | (S)                        | (S)                  | (S)                             | (S)           | (S)  | (S)   | (S) | (S) |
| PARKING AREAS INCLUDING PRIVATE DRIVEWAYS     |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| All establishments specializing in type ----- | 4 772                    | 33 807          | 604 640                | 2 659 342                  | 2 338 490            | 2 468 142                       | 1 423 122     | 191 200  | 2   | 2   | 3   |
| Establishments with —                         |                          |                 |                        |                            |                      |                                 |               |  |   |     |     |
| 100 percent specialization -----              | 3 115                    | 18 527          | 310 392                | 1 288 694                  | 1 288 694            | 1 212 396                       | 730 086       | 76 297   | 3   | 3   | 6   |
| 90 to 99 percent specialization -----         | 483                      | 3 972           | 78 950                 | 375 773                    | 352 561              | 354 740                         | 184 332       | 21 032   | 6   | 5   | 6   |
| 80 to 89 percent specialization -----         | 326                      | 2 617           | 48 301                 | 215 487                    | 178 030              | 193 217                         | 110 023       | 22 269   | 8   | 5   | 5   |
| 70 to 79 percent specialization -----         | 462                      | 4 587           | 76 129                 | 364 857                    | 266 699              | 332 888                         | 178 426       | 31 968   | 5   | 5   | 6   |
| 60 to 69 percent specialization -----         | 306                      | 3 104           | 66 141                 | 316 984                    | 199 064              | 282 920                         | 162 734       | 34 064   | 6   | 4   | 6   |
| 51 to 59 percent specialization -----         | 78                       | 996             | 24 725                 | 97 546                     | 53 439               | 91 978                          | 57 519        | 5 567  | 9   | 8   | 12  |

**Table 9. Quarterly Construction Worker Hours and Employment for Establishments With**

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Location of establishment  | Number of establishments | Average number of construction workers | Construction worker hours (thousands) | January to March                  |                          | April to June                     |                          |
|----------------------------|--------------------------|--|---------------------------------------|-----------------------------------|--------------------------|-----------------------------------|--------------------------|
|                            |                          |  |                                       | Construction workers <sup>1</sup> | Hours worked (thousands) | Construction workers <sup>1</sup> | Hours worked (thousands) |
|                            | A                        | B                                      | C                                     | D                                 | E                        | F                                 | G                        |
| <b>United States .....</b> | <b>23 422</b>            | <b>186 840</b>                         | <b>297 487</b>                        | <b>154 271</b>                    | <b>57 758</b>            | <b>196 024</b>                    | <b>78 451</b>            |
| Alabama .....              | 244                      | 1 950                                  | 3 001                                 | 1 866                             | 648                      | 1 936                             | 746                      |
| Alaska .....               | 53                       | 216                                    | 268                                   | 102                               | 29                       | 218                               | 71                       |
| Arizona .....              | 498                      | 5 992                                  | 9 950                                 | 5 796                             | 2 181                    | 6 057                             | 2 633                    |
| Arkansas .....             | 174                      | 1 122                                  | 1 466                                 | 996                               | 308                      | 1 140                             | 355                      |
| California .....           | 2 846                    | 28 823                                 | 44 275                                | 27 768                            | 10 305                   | 28 635                            | 11 245                   |
| Colorado .....             | 496                      | 3 491                                  | 5 095                                 | 2 892                             | 947                      | 3 755                             | 1 423                    |
| Connecticut .....          | 451                      | 2 439                                  | 4 408                                 | 1 527                             | 642                      | 2 630                             | 1 190                    |
| Delaware .....             | 56                       | 844                                    | 1 343                                 | 608                               | 200                      | 890                               | 356                      |
| District of Columbia ..... | *11                      | 67                                     | *112                                  | 52                                | 29                       | 71                                | 26                       |
| Florida .....              | 1 370                    | 13 642                                 | 21 599                                | 12 671                            | 4 874                    | 14 026                            | 5 384                    |
| Georgia .....              | 498                      | 4 944                                  | 7 491                                 | 4 506                             | 1 521                    | 5 010                             | 1 915                    |
| Hawaii .....               | 17                       | 162                                    | 266                                   | 171                               | 70                       | 146                               | 61                       |
| Idaho .....                | 119                      | 344                                    | 517                                   | 246                               | 89                       | 330                               | 115                      |
| Illinois .....             | 1 090                    | 10 909                                 | 17 147                                | 7 919                             | 2 856                    | 11 882                            | 4 701                    |
| Indiana .....              | 503                      | 3 201                                  | 4 881                                 | 2 277                             | 840                      | 3 450                             | 1 345                    |
| Iowa .....                 | 261                      | 1 954                                  | 3 179                                 | 1 166                             | 430                      | 2 173                             | 907                      |
| Kansas .....               | 298                      | 2 038                                  | 3 292                                 | 1 642                             | 609                      | 2 190                             | 905                      |
| Kentucky .....             | 308                      | 2 078                                  | 3 186                                 | 1 829                             | 587                      | 2 211                             | 863                      |
| Louisiana .....            | 94                       | 752                                    | 1 033                                 | 730                               | 213                      | 765                               | 261                      |
| Maine .....                | 179                      | 931                                    | 1 619                                 | 480                               | 227                      | 986                               | 408                      |
| Maryland .....             | 466                      | 7 266                                  | 13 289                                | 6 009                             | 2 778                    | 7 614                             | 3 433                    |
| Massachusetts .....        | 630                      | 3 757                                  | 6 547                                 | 2 513                             | 1 012                    | 3 967                             | 1 714                    |
| Michigan .....             | 989                      | 5 723                                  | 8 823                                 | 3 264                             | 1 164                    | 6 344                             | 2 401                    |
| Minnesota .....            | 549                      | 3 412                                  | 5 742                                 | 1 905                             | 727                      | 3 834                             | 1 617                    |
| Mississippi .....          | 125                      | 724                                    | 798                                   | 704                               | 179                      | 701                               | 198                      |
| Missouri .....             | 694                      | 5 400                                  | 8 491                                 | 4 451                             | 1 607                    | 5 410                             | 2 261                    |
| Montana .....              | 90                       | 174                                    | 309                                   | 88                                | 34                       | 144                               | 97                       |
| Nebraska .....             | 182                      | 1 238                                  | 1 875                                 | 1 022                             | 326                      | 1 399                             | 488                      |
| Nevada .....               | 98                       | 1 015                                  | 1 502                                 | 940                               | 355                      | 1 068                             | 377                      |
| New Hampshire .....        | 217                      | 1 266                                  | 2 151                                 | 875                               | 332                      | 1 353                             | 555                      |
| New Jersey .....           | 618                      | 5 752                                  | 9 236                                 | 4 479                             | 1 624                    | 6 147                             | 2 523                    |
| New Mexico .....           | 136                      | 1 148                                  | 1 662                                 | 986                               | 343                      | 1 102                             | 394                      |
| New York .....             | 1 304                    | 9 333                                  | 15 498                                | 6 482                             | 2 624                    | 10 506                            | 4 220                    |
| North Carolina .....       | 602                      | 3 947                                  | 6 356                                 | 3 498                             | 1 316                    | 4 002                             | 1 658                    |
| North Dakota .....         | 84                       | 220                                    | 322                                   | 112                               | 34                       | 291                               | 105                      |
| Ohio .....                 | 1 099                    | 8 505                                  | 13 929                                | 5 761                             | 2 232                    | 9 052                             | 3 768                    |
| Oklahoma .....             | 188                      | 1 050                                  | 1 375                                 | 1 002                             | 335                      | 1 115                             | 353                      |
| Oregon .....               | 274                      | 1 277                                  | 1 782                                 | 1 247                             | 432                      | 1 282                             | 486                      |
| Pennsylvania .....         | 1 060                    | 6 739                                  | 10 834                                | 4 278                             | 1 551                    | 7 288                             | 2 858                    |
| Rhode Island .....         | 124                      | 578                                    | 954                                   | 390                               | 142                      | 581                               | 239                      |
| South Carolina .....       | 219                      | 1 907                                  | 2 624                                 | 1 594                             | 558                      | 2 273                             | 736                      |
| South Dakota .....         | 105                      | 535                                    | 895                                   | 273                               | 112                      | 640                               | 267                      |
| Tennessee .....            | 305                      | 1 977                                  | 3 234                                 | 1 826                             | 687                      | 2 130                             | 890                      |
| Texas .....                | 1 441                    | 12 768                                 | 20 699                                | 12 733                            | 5 006                    | 13 482                            | 5 391                    |
| Utah .....                 | 223                      | 1 279                                  | 2 043                                 | 935                               | 373                      | 1 249                             | 512                      |
| Vermont .....              | 91                       | 411                                    | 707                                   | 263                               | 105                      | 421                               | 180                      |
| Virginia .....             | 626                      | 6 823                                  | 11 129                                | 6 144                             | 2 239                    | 7 060                             | 2 939                    |
| Washington .....           | 553                      | 2 857                                  | 4 229                                 | 2 779                             | 995                      | 2 857                             | 1 055                    |
| West Virginia .....        | 64                       | 553                                    | 781                                   | 404                               | 150                      | 578                               | 202                      |
| Wisconsin .....            | 630                      | 3 095                                  | 5 267                                 | 1 897                             | 718                      | 3 401                             | 1 520                    |
| Wyoming .....              | 46                       | 189                                    | 254                                   | 148                               | 37                       | 208                               | 78                       |

<sup>1</sup>Construction workers during pay periods including 12th of March, May, August, and November.



Payroll by State: 1987

| July to September     |                          | October to December   |                          | Relative standard error of estimate (percent) for column— |    |    |    |    |    |    |    |    |    | Location of establishment |
|-----------------------|--------------------------|-----------------------|--------------------------|---|----|----|----|----|----|----|----|----|----|---------------------------|
| Construction workers¹ | Hours worked (thousands) | Construction workers¹ | Hours worked (thousands) |   |    |    |    |    |    |    |    |    |    |                           |
| H                     | I                        | J                     | K                        | B   | C  | D  | E  | F  | G  | H  | I  | J  | K  |                           |
| 209 991               | 86 791                   | 187 138               | 74 486                   | 1   | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | U.S.                      |
| 2 046                 | 806                      | 1 955                 | 800                      | 7   | 8  | 7  | 8  | 6  | 8  | 7  | 9  | 11 | 12 | AL                        |
| 360                   | 103                      | 186                   | 63                       | 19  | 16 | 27 | 26 | 21 | 17 | 19 | 17 | 26 | 23 | AK                        |
| 6 550                 | 2 820                    | 5 566                 | 2 314                    | 3   | 4  | 3  | 3  | 3  | 3  | 3  | 4  | 3  | 4  | AZ                        |
| 1 281                 | 422                      | 1 070                 | 379                      | 17  | 15 | 19 | 17 | 20 | 16 | 17 | 16 | 18 | 19 | AR                        |
| 30 173                | 11 886                   | 28 717                | 10 838                   | 2   | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | CA                        |
| 4 017                 | 1 527                    | 3 301                 | 1 196                    | 5   | 7  | 5  | 7  | 5  | 7  | 5  | 7  | 5  | 7  | CO                        |
| 2 920                 | 1 346                    | 2 677                 | 1 228                    | 5   | 6  | 7  | 9  | 5  | 7  | 5  | 7  | 5  | 6  | CT                        |
| 1 007                 | 427                      | 871                   | 358                      | 10  | 11 | 12 | 8  | 10 | 14 | 9  | 12 | 10 | 11 | DE                        |
| *76                   | *27                      | *68                   | *28                      | 40  | 42 | 38 | 39 | 40 | 39 | 42 | 44 | 42 | 48 | DC                        |
| 14 550                | 5 858                    | 13 321                | 5 481                    | 3   | 3  | 3  | 3  | 4  | 3  | 3  | 4  | 3  | 3  | FL                        |
| 5 278                 | 2 116                    | 4 980                 | 1 937                    | 4   | 6  | 5  | 6  | 5  | 6  | 4  | 6  | 4  | 6  | GA                        |
| 150                   | 66                       | 181                   | 67                       | 10  | 16 | 7  | 14 | 12 | 18 | 12 | 18 | 8  | 16 | HI                        |
| 499                   | 193                      | 303                   | 118                      | 9   | 10 | 9  | 13 | 16 | 11 | 11 | 17 | 7  | 14 | ID                        |
| 12 507                | 5 140                    | 11 328                | 4 448                    | 2   | 3  | 4  | 4  | 2  | 3  | 2  | 3  | 3  | 3  | IL                        |
| 3 886                 | 1 502                    | 3 194                 | 1 193                    | 5   | 7  | 6  | 8  | 5  | 8  | 6  | 7  | 5  | 7  | IN                        |
| 2 427                 | 1 029                    | 2 051                 | 811                      | 7   | 9  | 8  | 12 | 9  | 11 | 8  | 10 | 7  | 9  | IA                        |
| 2 346                 | 988                      | 1 974                 | 787                      | 5   | 7  | 6  | 8  | 6  | 7  | 6  | 7  | 6  | 7  | KS                        |
| 2 299                 | 980                      | 1 982                 | 755                      | 7   | 9  | 9  | 11 | 8  | 10 | 7  | 11 | 7  | 9  | KY                        |
| 791                   | 304                      | 724                   | 253                      | 18  | 19 | 19 | 22 | 18 | 20 | 17 | 19 | 19 | 18 | LA                        |
| 1 208                 | 554                      | 1 048                 | 428                      | 13  | 16 | 16 | 21 | 13 | 16 | 12 | 18 | 14 | 16 | ME                        |
| 8 004                 | 3 704                    | 7 438                 | 3 373                    | 2   | 7  | 2  | 8  | 3  | 6  | 2  | 7  | 2  | 8  | MD                        |
| 4 505                 | 2 011                    | 4 051                 | 1 808                    | 4   | 5  | 4  | 6  | 4  | 5  | 4  | 5  | 4  | 5  | MA                        |
| 7 208                 | 3 039                    | 6 087                 | 2 217                    | 4   | 5  | 5  | 8  | 4  | 6  | 4  | 5  | 4  | 5  | MI                        |
| 4 340                 | 1 934                    | 3 570                 | 1 463                    | 6   | 8  | 6  | 9  | 6  | 8  | 6  | 9  | 7  | 9  | MN                        |
| 763                   | 221                      | 728                   | 199                      | 15  | 25 | 19 | 28 | 16 | 26 | 16 | 24 | 15 | 25 | MS                        |
| 6 112                 | 2 441                    | 5 628                 | 2 181                    | 4   | 5  | 5  | 5  | 5  | 6  | 5  | 5  | 4  | 5  | MO                        |
| 270                   | 111                      | 192                   | 64                       | 20  | 20 | 30 | 34 | 30 | 22 | 19 | 21 | 22 | 27 | MT                        |
| 1 506                 | 629                      | 1 024                 | 431                      | 19  | 17 | 28 | 27 | 17 | 17 | 21 | 18 | 14 | 14 | NE                        |
| 1 002                 | 395                      | 1 049                 | 373                      | 7   | 8  | 8  | 8  | 7  | 8  | 7  | 8  | 7  | 8  | NV                        |
| 1 604                 | 695                      | 1 231                 | 568                      | 7   | 11 | 12 | 14 | 8  | 11 | 8  | 11 | 8  | 12 | NH                        |
| 6 593                 | 2 736                    | 5 789                 | 2 350                    | 6   | 7  | 7  | 7  | 6  | 7  | 6  | 7  | 5  | 8  | NJ                        |
| 1 262                 | 486                      | 1 244                 | 437                      | 9   | 12 | 9  | 11 | 9  | 10 | 10 | 13 | 11 | 14 | NM                        |
| 11 304                | 4 838                    | 9 054                 | 3 815                    | 3   | 3  | 3  | 4  | 3  | 3  | 3  | 3  | 3  | 4  | NY                        |
| 4 273                 | 1 791                    | 4 016                 | 1 589                    | 6   | 7  | 6  | 8  | 6  | 7  | 6  | 7  | 7  | 9  | NC                        |
| 250                   | 99                       | 225                   | 83                       | 24  | 22 | 32 | 30 | 22 | 21 | 23 | 26 | 26 | 27 | ND                        |
| 9 971                 | 4 274                    | 9 246                 | 3 654                    | 3   | 4  | 3  | 4  | 3  | 4  | 3  | 4  | 3  | 4  | OH                        |
| 1 090                 | 386                      | 992                   | 298                      | 11  | 16 | 12 | 17 | 13 | 17 | 11 | 16 | 13 | 17 | OK                        |
| 1 342                 | 485                      | 1 236                 | 377                      | 9   | 11 | 9  | 11 | 10 | 12 | 11 | 15 | 10 | 13 | OR                        |
| 7 986                 | 3 357                    | 7 407                 | 3 066                    | 3   | 4  | 4  | 5  | 3  | 4  | 3  | 4  | 3  | 5  | PA                        |
| 702                   | 308                      | 639                   | 263                      | 7   | 10 | 9  | 12 | 7  | 10 | 8  | 11 | 8  | 11 | RI                        |
| 2 065                 | 721                      | 1 697                 | 607                      | 13  | 12 | 11 | 13 | 20 | 13 | 12 | 13 | 11 | 13 | SC                        |
| 711                   | 302                      | 515                   | 212                      | 16  | 28 | 19 | 26 | 17 | 31 | 18 | 31 | 16 | 28 | SD                        |
| 2 122                 | 919                      | 1 828                 | 736                      | 8   | 10 | 8  | 10 | 8  | 11 | 8  | 10 | 8  | 9  | TN                        |
| 13 069                | 5 462                    | 11 791                | 4 838                    | 3   | 4  | 3  | 4  | 3  | 4  | 3  | 4  | 3  | 4  | TX                        |
| 1 554                 | 595                      | 1 376                 | 562                      | 11  | 10 | 11 | 13 | 11 | 11 | 12 | 10 | 11 | 10 | UT                        |
| 547                   | 237                      | 412                   | 184                      | 16  | 19 | 20 | 21 | 17 | 20 | 16 | 19 | 17 | 21 | VT                        |
| 7 558                 | 3 236                    | 6 529                 | 2 714                    | 4   | 5  | 4  | 5  | 4  | 5  | 4  | 5  | 4  | 5  | VA                        |
| 3 163                 | 1 204                    | 2 628                 | 974                      | 6   | 8  | 11 | 16 | 6  | 8  | 7  | 8  | 6  | 8  | WA                        |
| 625                   | 228                      | 604                   | 200                      | 15  | 16 | 27 | 35 | 16 | 19 | 12 | 14 | 12 | 11 | WV                        |
| 3 877                 | 1 738                    | 3 215                 | 1 290                    | 6   | 7  | 10 | 13 | 6  | 7  | 6  | 8  | 6  | 8  | WI                        |
| 223                   | 86                       | 178                   | 52                       | 20  | 16 | 22 | 11 | 23 | 15 | 21 | 22 | 22 | 17 | WY                        |

**Table 10. Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Location of construction work | 1987   |  |                            |  |                            | 1982 construction receipts for work done in this State <sup>1</sup> | Percent change 1987 (col A) to 1982 (col F) | Relative standard error of estimate (percent) for column— |    |     |
|-------------------------------|--|--|----------------------------|--|----------------------------|---|---|---|----|-----|
|                               | Value of construction work done in this State <sup>1</sup> | Construction work done by establishments located in this State |                            | Construction work done by establishments not located in this State |                            |   |   |   |    |     |
|                               |  | Number   | Value of construction work | Number   | Value of construction work |   |   |   |    |     |
|                               |  |  |                            |  |                            |   |   |   |    |     |
| A                             | B  | C  | D                          | E  | F                          | G   | A   | C   | E  |     |
| United States -----           | 15 055 671   | 23 162   | 13 977 636                 | 3 800  | 1 078 034                  | 8 207 000   | 83.4  | 1   | 1  | 2   |
| Alabama -----                 | 102 097  | 244  | 87 883                     | 65   | 14 213                     | 49 596  | 105.9                                       | 8   | 9  | 13  |
| Alaska -----                  | 18 156   | 44   | 16 473                     | 43   | 1 682                      | 45 845  | -60.4                                       | 13  | 15 | 16  |
| Arizona -----                 | 459 107  | 490  | 444 315                    | 47   | 14 791                     | 200 696   | 128.8                                       | 3   | 3  | 14  |
| Arkansas -----                | 58 797   | 174  | 54 596                     | 47   | 4 201                      | 34 121  | 72.3  | 16  | 17 | 32  |
| California -----              | 2 769 038  | 2 810  | 2 744 288                  | 94   | 24 749                     | 1 298 896   | 113.2                                       | 1   | 1  | 11  |
| Colorado -----                | 212 859  | 496  | 211 625                    | 33   | 1 233                      | 264 890   | -19.6                                       | 4   | 4  | 12  |
| Connecticut -----             | 230 866  | 449  | 216 103                    | 61   | 14 762                     | 102 591   | 125.0                                       | 6   | 6  | 13  |
| Delaware -----                | 75 824   | 56   | 64 374                     | 115  | 11 450                     | 46 902  | 61.7  | 7   | 8  | 7   |
| District of Columbia -----    | 108 966  | *6   | 1 060                      | 110  | 107 905                    | 49 267  | 121.2                                       | 4   | 33 | 4   |
| Florida -----                 | 807 487  | 1 365  | 752 569                    | 58   | 54 917                     | 499 099   | 61.8  | 3   | 3  | 1   |
| Georgia -----                 | 351 354  | 497  | 322 175                    | 76   | 29 178                     | 116 902   | 200.6                                       | 4   | 5  | 5   |
| Hawaii -----                  | 15 308   | 16   | 15 308                     | -  | -                          | 53 448  | -71.4                                       | 10  | 10 | -   |
| Idaho -----                   | 26 954   | 119  | 21 187                     | 24   | 5 767                      | 17 755  | 51.8  | 5   | 6  | 3   |
| Illinois -----                | 1 129 414  | 1 081  | 1 089 979                  | 88   | 39 435                     | 446 957   | 152.7                                       | 2   | 2  | 11  |
| Indiana -----                 | 270 655  | 501  | 223 714                    | 161  | 46 940                     | 101 144   | 167.6                                       | 4   | 5  | 8   |
| Iowa -----                    | 141 964  | 261  | 128 279                    | 131  | 13 685                     | 53 949  | 163.1                                       | 6   | 6  | 20  |
| Kansas -----                  | 160 514  | 289  | 136 839                    | 110  | 23 674                     | 79 427  | 102.1                                       | 4   | 5  | 8   |
| Kentucky -----                | 140 794  | 299  | 114 387                    | 110  | 26 406                     | 99 240  | 41.9  | 6   | 7  | 6   |
| Louisiana -----               | 66 626   | 94   | 50 185                     | 54   | 16 441                     | 98 445  | -32.3                                       | 11  | 15 | 3   |
| Maine -----                   | 60 799   | 171  | 58 799                     | 34   | 2 000                      | 20 114  | 202.3                                       | 9   | 10 | 32  |
| Maryland -----                | 410 596  | 455  | 372 579                    | 125  | 38 017                     | 181 533   | 126.2                                       | 3   | 3  | 10  |
| Massachusetts -----           | 334 941  | 627  | 302 582                    | 114  | 32 358                     | 144 436   | 131.9                                       | 3   | 4  | 5   |
| Michigan -----                | 560 115  | 989  | 554 498                    | 71   | 5 616                      | 191 123   | 193.1                                       | 3   | 3  | 7   |
| Minnesota -----               | 345 086  | 541  | 324 446                    | 90   | 20 639                     | 173 486   | 98.9  | 5   | 6  | 19  |
| Mississippi -----             | 34 280   | 117  | 24 976                     | 68   | 9 304                      | 62 530  | -45.2                                       | 10  | 14 | 4   |
| Missouri -----                | 365 083  | 681  | 339 140                    | 113  | 25 942                     | 167 685   | 117.7                                       | 3   | 4  | 9   |
| Montana -----                 | 9 886  | 90   | 8 167                      | 24   | *1 719                     | 24 167  | -59.1                                       | 24  | 27 | 44  |
| Nebraska -----                | 60 357   | 165  | 55 116                     | 26   | 5 241                      | 59 870  | .8  | 10  | 11 | 20  |
| Nevada -----                  | 102 765  | 98   | 93 218                     | 62   | 9 547                      | 57 496  | 78.7  | 4   | 4  | 7   |
| New Hampshire -----           | 100 002  | 217  | 80 844                     | 117  | 19 158                     | 18 678  | 435.4                                       | 7   | 8  | 17  |
| New Jersey -----              | 565 111  | 617  | 501 986                    | 89   | 63 125                     | 247 340   | 128.5                                       | 3   | 3  | 9   |
| New Mexico -----              | 79 926   | 136  | 73 295                     | 34   | 6 631                      | 48 963  | 63.2  | 8   | 9  | 17  |
| New York -----                | 944 022  | 1 286  | 905 200                    | 130  | 38 821                     | 605 423   | 55.9  | 2   | 2  | 7   |
| North Carolina -----          | 267 268  | 602  | 240 752                    | 119  | 26 516                     | 113 328   | 135.8                                       | 8   | 8  | 16  |
| North Dakota -----            | 14 863   | 84   | 10 641                     | 20   | 4 222                      | 18 954  | -21.6                                       | 16  | 21 | 15  |
| Ohio -----                    | 646 260  | 1 066  | 626 154                    | 97   | 20 106                     | 279 122   | 131.5                                       | 3   | 3  | 10  |
| Oklahoma -----                | 57 256   | 188  | 52 155                     | 36   | 5 100                      | 92 524  | -38.1                                       | 8   | 9  | 2   |
| Oregon -----                  | 88 027   | 272  | 73 939                     | 67   | 14 087                     | 78 108  | 12.7  | 8   | 9  | 15  |
| Pennsylvania -----            | 526 444  | 1 044  | 492 797                    | 89   | 33 646                     | 309 027   | 70.4  | 3   | 3  | 12  |
| Rhode Island -----            | 45 382   | 123  | 40 118                     | 49   | 5 264                      | 24 736  | 83.5  | 10  | 11 | 2   |
| South Carolina -----          | 106 552  | 219  | 93 868                     | 47   | 12 684                     | 68 747  | 55.0  | 10  | 11 | 1   |
| South Dakota -----            | 45 337   | 105  | 38 701                     | 38   | *6 635                     | 16 451  | 175.6                                       | 16  | 17 | 50  |
| Tennessee -----               | 187 971  | 305  | 133 145                    | 174  | 54 825                     | 92 039  | 104.2                                       | 10  | 6  | 30  |
| Texas -----                   | 763 458  | 1 437  | 739 075                    | 70   | 24 383                     | 875 307   | -12.8                                       | 3   | 4  | 12  |
| Utah -----                    | 70 723   | 219  | 70 460                     | 3  | 263                        | 63 350  | 11.6  | 10  | 10 | (W) |
| Vermont -----                 | 30 451   | 83   | 27 908                     | 41   | 2 543                      | 11 605  | 162.4                                       | 14  | 15 | 15  |
| Virginia -----                | 545 940  | 625  | 450 635                    | 136  | 95 305                     | 221 389   | 146.6                                       | 4   | 4  | 2   |
| Washington -----              | 233 812  | 551  | 213 030                    | 89   | 20 781                     | 108 831   | 114.8                                       | 5   | 5  | 13  |
| West Virginia -----           | 46 474   | 64   | 37 472                     | 97   | 9 002                      | 30 481  | 52.5  | 10  | 12 | 13  |
| Wisconsin -----               | 246 127  | 624  | 234 530                    | 67   | 11 596                     | 110 190   | 123.4                                       | 5   | 5  | 6   |
| Wyoming -----                 | 13 555   | 46   | 12 050                     | 18   | 1 505                      | 30 771  | -55.9                                       | 15  | 17 | 9   |

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.



Table 11. Dollar Value of Business Done for Establishments With Payroll by Kind of Business Activity: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Primary and other kinds of business activities               | Dollar value of business done <sup>1</sup> |           | Relative standard error of estimate (percent) |      |
|--|--|-----------|---|------|
|  | 1987                                       | 1982      | 1987  | 1982 |
| All kinds of business.....                                   | 15 212 049                                 | 8 376 774 | 1   | 1    |
| General building contractor .....                            | 103 105                                    | 98 683    | 5   | 3    |
| Highway and street contractor.....                           | 117 264                                    | 153 272   | 5   | 4    |
| Paving contractor .....                                      | 864 799                                    | 1 801 907 | 4   | 2    |
| Heavy construction.....                                      | 174 848                                    | 110 141   | 5   | (NA) |
| Heavy construction contractor.....                           | 85 533                                     | (NA)      | 6   | 3    |
| Excavating and earthmoving contractor .....                  | 89 315                                     | (NA)      | 8   | 2    |
| Masonry contractor .....                                     | 102 811                                    | 69 803    | 10  | 5    |
| Concrete construction.....                                   | 13 194 384                                 | 5 134 503 | 1   | 1    |
| Asphalt contractor .....                                     | 2 379 783                                  | (NA)      | 2   | (NA) |
| Concrete contractor.....                                     | 7 573 021                                  | (NA)      | 1   | (NA) |
| Gunite contractor .....                                      | 180 715                                    | (NA)      | 5   | (NA) |
| Culvert and curb contractor .....                            | 234 340                                    | (NA)      | 7   | (NA) |
| Foundation contractor, concrete.....                         | 2 826 522                                  | 32 209    | 2   | 6    |
| Other construction activities.....                           | 297 472                                    | (S)       | 6   | (S)  |
| Rental of construction machinery or equipment to others..... | 35 484                                     | 16 294    | 4   | 9    |
| Retail trade .....   | 23 577                                     | 42 541    | 8   | 3    |
| Other activities .....                                       | 106 633                                    | (S)       | 5   | (S)  |
| Kind of business activity, n.s.k. ....                       | 191 672                                    | (S)       | 8   | (S)  |

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

**Table 12. Selected Industry Ratios for Establishments With Payroll: 1987 and 1982**

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Selected statistics  | 1987    | 1982    | Relative<br>standard error<br>of estimate<br>(percent)<br>for 1987 |
|--|---------|---------|--|
| <b>AVERAGE PER ESTABLISHMENT</b>                                 |         |         |  |
| Number of employees**  | 9.3     | 7.9     | 1  |
| Number of construction workers                                   | 8.0     | 6.9     | 1  |
| Number of all other employees                                    | 1.3     | (NA)    | 1  |
| Payroll, all employees \$1,000                                   | 178.2   | 115.6   | 1  |
| Payroll, construction workers do                                 | 140.0   | 95.1    | 1  |
| Payroll, other employees do                                      | 38.3    | 20.4    | 1  |
| Dollar value of business done do                                 | 649.5   | 419.1   | 1  |
| Value of construction work <sup>1</sup> do                       | 642.8   | 410.6   | 1  |
| Cost of materials, components, supplies, and fuels do            | 237.7   | 156.4   | 1  |
| Construction work subcontracted to others do                     | 51.3    | 38.0    | 2  |
| Rental cost for machinery, equipment, and buildings do           | 14.8    | 8.5     | 2  |
| Capital expenditures, other than land do                         | 15.6    | 8.9     | 2  |
| Gross book value of depreciable assets do                        | 107.5   | 98.8    | 2  |
| <b>AVERAGE PER EMPLOYEE</b>                                      |         |         |  |
| Payroll, all employees do  | 19.1    | 14.7    | (W)  |
| Dollar value of business done do                                 | 69.7    | 53.3    | 1  |
| Value added†† do   | 38.7    | 28.6    | 1  |
| <b>AVERAGE PER CONSTRUCTION WORKER</b>                           |         |         |  |
| Payroll, construction workers do                                 | 17.5    | 13.8    | (W)  |
| Value of construction work <sup>1</sup> do                       | 80.6    | 59.5    | 1  |
| Construction worker hours  | 1 592.2 | 1 447.7 | 1  |
| <b>AVERAGE PER OTHER EMPLOYEE</b>                                |         |         |  |
| Payroll, other employees \$1,000                                 | 28.6    | (NA)    | 1  |
| <b>AVERAGE PER DOLLAR VALUE OF CONSTRUCTION WORK<sup>1</sup></b> |         |         |  |
| Payroll, all employees   | .277    | .281    | (W)  |
| Cost of materials, components, supplies, and fuels               | .370    | .381    | (W)  |
| Cost of construction work subcontracted to others                | .080    | .093    | 1  |
| Rental cost for machinery, equipment, and buildings              | .023    | .021    | 2  |

<sup>1</sup>In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.



Table 13. Selected Industry Ratios for Establishments With Payroll by State: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

| Location of establishment  | Average number of employees** per establishment | Payroll per employee (\$1,000) | Construction worker hours per construction worker | Value of construction work per construction worker (\$1,000) | Average per dollar of value of construction work |  |  |   |
|----------------------------|---|--------------------------------|---|--|--|--|--|---|
|                            |   |                                |   |  | Payroll, all employees                           | Cost of materials, components, supplies, and fuels | Cost of construction work sub-contracted to others | Rental cost for machinery, equipment, and buildings |
| United States -----        | 9.3   | 19.1                           | 1 592.2   | 80.6   | .277   | .370   | .080   | .023  |
| Alabama -----              | 9.3   | 15.0                           | 1 539.0   | 60.3   | .290   | .352   | .067   | .020  |
| Alaska -----               | 5.0   | 20.6                           | 1 240.7   | 98.3   | .256   | .351   | .077   | .034  |
| Arizona -----              | 14.0  | 19.1                           | 1 660.5   | 75.0   | .297   | .420   | .059   | .022  |
| Arkansas -----             | 7.2   | 11.8                           | 1 306.6   | 54.7   | .241   | .438   | *.085  | .024  |
| California -----           | 11.7  | 22.9                           | 1 536.1   | 96.5   | .275   | .361   | .100   | .028  |
| Colorado -----             | 8.3   | 16.6                           | 1 459.5   | 62.0   | .315   | .313   | .074   | .027  |
| Connecticut -----          | 6.6   | 22.5                           | 1 807.3   | 96.0   | .286   | .329   | .046   | .017  |
| Delaware -----             | 16.6  | 21.2                           | 1 591.2   | 94.9   | .246   | .341   | .148   | .022  |
| District of Columbia ----- | *7.3  | *18.0                          | *1 671.6  | *101.9   | *.211  | *.315  | (S)  | *.008   |
| Florida -----              | 11.5  | 15.2                           | 1 583.3   | 57.5   | .305   | .353   | .078   | .026  |
| Georgia -----              | 11.7  | 16.3                           | 1 515.2   | 70.7   | .270   | .378   | .076   | .019  |
| Hawaii -----               | 11.3  | 21.6                           | 1 642.0   | 96.3   | .266   | (D)  | .140   | .020  |
| Idaho -----                | 3.2   | 13.9                           | 1 502.9   | 64.1   | .243   | (D)  | .038   | .021  |
| Illinois -----             | 11.6  | 23.5                           | 1 571.8   | 102.5  | .264   | .356   | .107   | .013  |
| Indiana -----              | 7.4   | 16.9                           | 1 524.8   | 72.8   | .269   | .403   | .048   | .014  |
| Iowa -----                 | 8.9   | 16.4                           | 1 626.9   | 81.8   | .238   | .426   | .062   | .019  |
| Kansas -----               | 8.0   | 19.2                           | 1 615.3   | 85.7   | .263   | .352   | .073   | .027  |
| Kentucky -----             | 8.0   | 13.2                           | 1 533.2   | 58.9   | .266   | .385   | .076   | .020  |
| Louisiana -----            | 9.9   | 12.7                           | 1 373.7   | 67.5   | .232   | .403   | .097   | .035  |
| Maine -----                | 6.1   | 14.7                           | 1 739.0   | 70.3   | .244   | .445   | .020   | .010  |
| Maryland -----             | 18.1  | 19.9                           | 1 828.9   | 73.4   | .315   | .399   | .060   | .025  |
| Massachusetts -----        | 7.1   | 21.2                           | 1 742.6   | 85.2   | .294   | .334   | .064   | .022  |
| Michigan -----             | 6.8   | 21.3                           | 1 541.7   | 101.7  | .247   | .383   | .055   | .014  |
| Minnesota -----            | 7.5   | 22.0                           | 1 682.9   | 99.6   | .267   | .360   | .066   | .011  |
| Mississippi -----          | 6.7   | 9.5                            | 1 102.2   | 39.1   | .280   | .351   | .061   | .015  |
| Missouri -----             | 9.1   | 19.6                           | 1 572.4   | 74.2   | .309   | .385   | .047   | .016  |
| Montana -----              | 2.1   | 10.3                           | 1 775.9   | 46.9   | .237   | .383   | *.010  | .016  |
| Nebraska -----             | 7.8   | 12.0                           | 1 514.5   | 53.5   | .258   | .401   | .071   | .028  |
| Nevada -----               | 12.1  | 24.0                           | 1 479.8   | 92.7   | .302   | .343   | .077   | .033  |
| New Hampshire -----        | 6.8   | 17.5                           | 1 699.1   | 71.8   | .286   | .381   | .039   | .011  |
| New Jersey -----           | 10.7  | 23.5                           | 1 605.7   | 91.9   | .295   | .371   | .073   | .025  |
| New Mexico -----           | 9.8   | 15.4                           | 1 447.7   | 64.9   | .277   | .404   | .062   | .011  |
| New York -----             | 8.4   | 23.5                           | 1 660.6   | 102.1  | .271   | .339   | .083   | .023  |
| North Carolina -----       | 7.7   | 13.6                           | 1 610.3   | 62.7   | .255   | .384   | .073   | .018  |
| North Dakota -----         | 3.2   | 14.0                           | 1 463.6   | 51.8   | .334   | .474   | .046   | .018  |
| Ohio -----                 | 9.2   | 19.8                           | 1 637.7   | 86.1   | .273   | .369   | .096   | .018  |
| Oklahoma -----             | 6.2   | 13.1                           | 1 309.5   | 50.1   | .290   | .345   | .059   | .022  |
| Oregon -----               | 5.5   | 16.1                           | 1 395.5   | 67.8   | .280   | .315   | .069   | .043  |
| Pennsylvania -----         | 7.4   | 18.1                           | 1 607.7   | 79.9   | .265   | .393   | .057   | .018  |
| Rhode Island -----         | 5.8   | 21.2                           | 1 650.5   | 85.7   | .306   | (D)  | .057   | .014  |
| South Carolina -----       | 10.1  | 11.6                           | 1 376.0   | 50.3   | .266   | .361   | .075   | .015  |
| South Dakota -----         | 6.1   | 14.5                           | 1 672.9   | 76.4   | .227   | .445   | .096   | .045  |
| Tennessee -----            | 7.5   | 14.8                           | 1 635.8   | 70.2   | .243   | .394   | .116   | .021  |
| Texas -----                | 10.5  | 16.2                           | 1 621.2   | 65.5   | .292   | .400   | .102   | .041  |
| Utah -----                 | 6.6   | 15.5                           | 1 597.3   | 61.3   | .293   | .315   | .068   | *.031   |
| Vermont -----              | 5.3   | 15.5                           | 1 720.2   | 81.2   | .222   | (D)  | .093   | .011  |
| Virginia -----             | 12.6  | 17.4                           | 1 631.1   | 72.2   | .278   | .392   | .071   | .025  |
| Washington -----           | 6.1   | 17.5                           | 1 480.2   | 78.5   | .261   | .322   | .053   | .027  |
| West Virginia -----        | 9.9   | 17.3                           | 1 412.3   | 76.1   | .260   | (D)  | .119   | *.026   |
| Wisconsin -----            | 5.8   | 18.1                           | 1 701.8   | 83.4   | .258   | .386   | .052   | .018  |
| Wyoming -----              | 4.9   | 16.7                           | 1 343.9   | 63.8   | .311   | (D)  | *.023  | .015  |





# APPENDIX A.

## Explanation of Terms

**Construction**—Is composed of three broad categories:

1. **New construction**—Includes the complete, original erection of structures and essential service facilities and the initial installation of integral equipment such as elevators, and plumbing, heating, and air-conditioning supplies and equipment.
2. **Additions, alterations or reconstruction**—Includes construction activity making structural changes to existing facilities. Generally, this type of activity is considered a capital investment in the property.
3. **Maintenance and repair**—Includes construction done for the purpose of upkeep of property rather than additional investment in the property.

Examples of the general distinction between maintenance and repair and reconstruction are provided here: roof repairs, including the replacement of shingles, gutters, etc., are classified under maintenance and repairs. A complete reroofing, however, is classified as reconstruction.

**Number of establishments in business during year**—Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments which were inactive or idle for the entire year were not included.

**Proprietors and working partners**—These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

**All employees**—Comprise all full-time and part-time employees on the payrolls of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not.

All employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

**Construction workers**—Includes all workers up through the working foreman level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment

operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category but are included in the "other employees" category.

**Other employees**—Includes employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

**Construction worker hours**—Includes the total number of hours worked by construction workers. Construction worker hours were collected for each of the four quarters of 1987.

**Payroll**—Includes the gross earnings paid in the calendar year 1987 to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if an unincorporated concern.

**Employer costs for fringe benefits (supplemental labor costs)**—Represents expenditures made by the employer during 1987 for legally required and voluntary fringe benefit programs for employees.

**Legally required contributions**—Include Social Security contributions, unemployment compensation, workman's compensation, and State temporary disability payments.

**Voluntary payments**—Include life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Dollar value of business done comprises the following detail:

**Value of construction work done**—Includes all value of construction work done during 1987 for construction work performed by general contractors, special trades contractors, subcontractors, and land development and improvement work. Included is new construction, additions and alterations or reconstruction, and maintenance and repair construction work. Also included is the value of any construction work done by the reporting establishments for themselves.



Builders were instructed to include the value of buildings and other structures built or being built for sale in 1987 but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease.

Establishments engaged in the sale and installation of such construction components as plumbing, heating, and central air conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators, etc., were instructed to include both the value for the installation and the receipts covering the price of the items installed.

Excluded was the cost of industrial and other specialized machinery and equipment which are not an integral part of a structure.

**Land receipts**—Includes receipts from the sale of land, whether held for sale or sold in connection with the sale of houses and other structures. It excludes the value of any improvements made to the land prior to the sale. (That value was to be included in the value of construction work done.)

**Other business receipts**—Includes business receipts not reported as value of construction work done or land receipts. The item includes business receipts from retail and wholesale trade, rental of equipment, manufacturing, transportation, legal service, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here.

Excluded was the value of construction work done and receipts from other business operations in foreign countries and non-operating income such as interest and dividends.

**Net value of construction work**—Derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

**Value added**—Derived for each establishment, value added is equal to dollar value of business done, less costs for construction work subcontracted to others, and costs for materials, components, supplies and fuels. For SIC 6552 and SIC 1531, for which land receipts are significant, land receipts are also subtracted from dollar value of business done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

**Selected costs**—Represents the costs for materials, components, and supplies; costs for construction work subcontracted to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

Costs for materials, components, and supplies include:

- total costs to reporting establishments during 1987 for the purchase of all materials, components, and supplies, except fuels. (Supplies include expendable tools which are charged to current accounts.)
- freight and other direct charges should represent only amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company.
- costs for materials, components, and supplies used by the reporting establishments in the construction or reconstruction of buildings/structures for themselves which are chargeable to their fixed assets accounts, are included in this item as are costs for materials bought and resold to others.
- costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use.

Excluded from this item are:

- industrial and other specialized machinery and equipment, such as printing presses; computer systems; etc., which are not an integral part of a structure
- materials furnished to contractors by the owners of projects:

Costs for construction work subcontracted to others include:

- all costs during 1987 for construction work subcontracted out to other construction contractors.

Excluded from this item are:

- The costs to the reporting establishment for its purchases of materials, components, and supplies, provided to a subcontractor for his use. Such costs are reported under a separate category, "costs for materials, components, and supplies."
- costs for the rental of machinery or equipment.

Costs for selected power, fuels, and lubricants include:

- costs for fuels, lubricants, and electric energy purchased during the year from other companies, or received from other establishments of the company.
- costs for natural and manufactured gas, fuel oil, coal and coke products, etc.

**Rental costs for machinery, equipment, and buildings**—Includes all costs during 1987 for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It



excludes costs for the rental of land. It also excludes costs under agreements which, in effect, are conditional sales contracts such as capital leases. Such costs are included in "capital expenditures."

**Selected purchased services**—Includes all costs during 1987 for communication services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies, or from other establishments of the same company. It includes only the cost of that repair necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property, or the cost of adapting it for another use. Such costs are included in "capital expenditures".

**Assets and depreciation**—Refers to the original cost of all fixed tangible assets such as buildings and other structures (offices, shops, etc.); stationary machinery (generators, shop equipment, etc.); mobile machinery (tractors, trucks, etc.); and other equipment (office furniture and fixtures, etc.). Not included are such items as current assets, depletable assets, intangible assets, and nondepreciable assets.

Data on assets and depreciation were collected separately for: (1) buildings and other structures, additions, and related facilities; and, (2) machinery and equipment.

Respondents were also asked to report capitalized expenditures, depreciation charges, and the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987.

**Capital expenditures**—Refers to all costs actually incurred during 1987 which were or would be chargeable to the fixed assets accounts of the reporting establishments and which were of the type for which depreciation accounts are ordinarily maintained. These expenditures cover the acquisition, the construction, and the major alteration of the reporting establishment's own buildings and other structures, whether purchased, constructed under contract, or constructed by the reporting establishment's own forces; and the acquisition of machinery and equipment.

If leasing arrangements met the criteria set down by the Financial Accounting Standards Board (FASB) for a capital lease, respondents were instructed to report the original cost or market value of that equipment or building as a fixed asset and capital expenditure if acquired during 1987.

If capital expenditures were not recorded directly at the establishment level but handled centrally at the company or division level, respondents were requested to report appropriate estimates for the individual establishments.

**Inventories**—Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others, but held by the reporting establishment.

Builders who built on their own account for sale were requested to report work in progress and finished units not sold for buildings and other structures built for sale.

Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

**Ownership of construction projects**—This item shows the distribution of the value of construction work done by ownership of the project, that is, Government owned or privately owned. This classification relates to the ownership of the projects or work undertaken during the construction phase. Government owned projects are shown separately for Federal, and State and local governments.

**Value of construction work subcontracted in from others**—Includes the value of construction work during 1987 for work done by reporting establishments for other construction contractors or builders. Establishments were asked to report the approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

**Types of construction**—This item provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in 1987. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function. For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose, i.e, office and residential, or commercial, they were to classify the building by major purpose.

In addition all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types. See the definition of "Construction" for the meanings of these terms.

Building construction:

- **Single-family houses, detached**—Includes all residential buildings constructed for one family use.
- **Single-family houses, attached (include townhouses)**—Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken wall from ground to roof.
- **Apartment buildings with two or more apartments**—Includes high-rise, low-rise, or any structures containing two or more housing units (excluding attached single-family houses and townhouses described above).
- **Hotels and motels**—Includes hotels, motels, and tourist cabins intended for transient accommodations.



- **Other residential buildings**—Includes dormitories, fraternity and sorority houses, nurses homes, and other nonhousekeeping residential structures.
- **Office buildings**—Includes all buildings which are used primarily for office space or for government administrative offices. Also included are banks or financial buildings which are three stories or more.
- **Other commercial buildings, such as stores, restaurants, and automobile service stations**—Includes all buildings which are intended for use primarily in the wholesale, retail, and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Industrial buildings**—Includes all industrial buildings and plants which are used to house production and assembly activities. Heavy industrial facilities such as blast furnaces, petroleum refineries, chemical complexes, etc., are not included in this category, but under nonbuilding construction.
- **Warehouses**—Includes commercial warehouses, cold storage plants, grain elevators, mini-warehouses, and other such storage buildings.
- **Religious buildings**—Includes all buildings which are intended for religious services or functions, such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings**—Includes all buildings which are used directly in administrative and instructional activities, such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories which are not a part of a manufacturing establishment, are also included.
- **Hospitals and institutional buildings**—Includes all buildings which are intended to provide hospital and institutional care, such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Farm buildings, nonresidential**—Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings**—Includes buildings which are used primarily for entertainment, social and recreational activities, such as sports arenas, theaters, music halls, golf and country club buildings, skating rinks, bowling alleys, and indoor swimming pools.
- **Other nonresidential buildings**—Includes nonresidential buildings which are not classified elsewhere, such as fire stations, prisons, civic centers, bus and air passenger terminals and hangars.

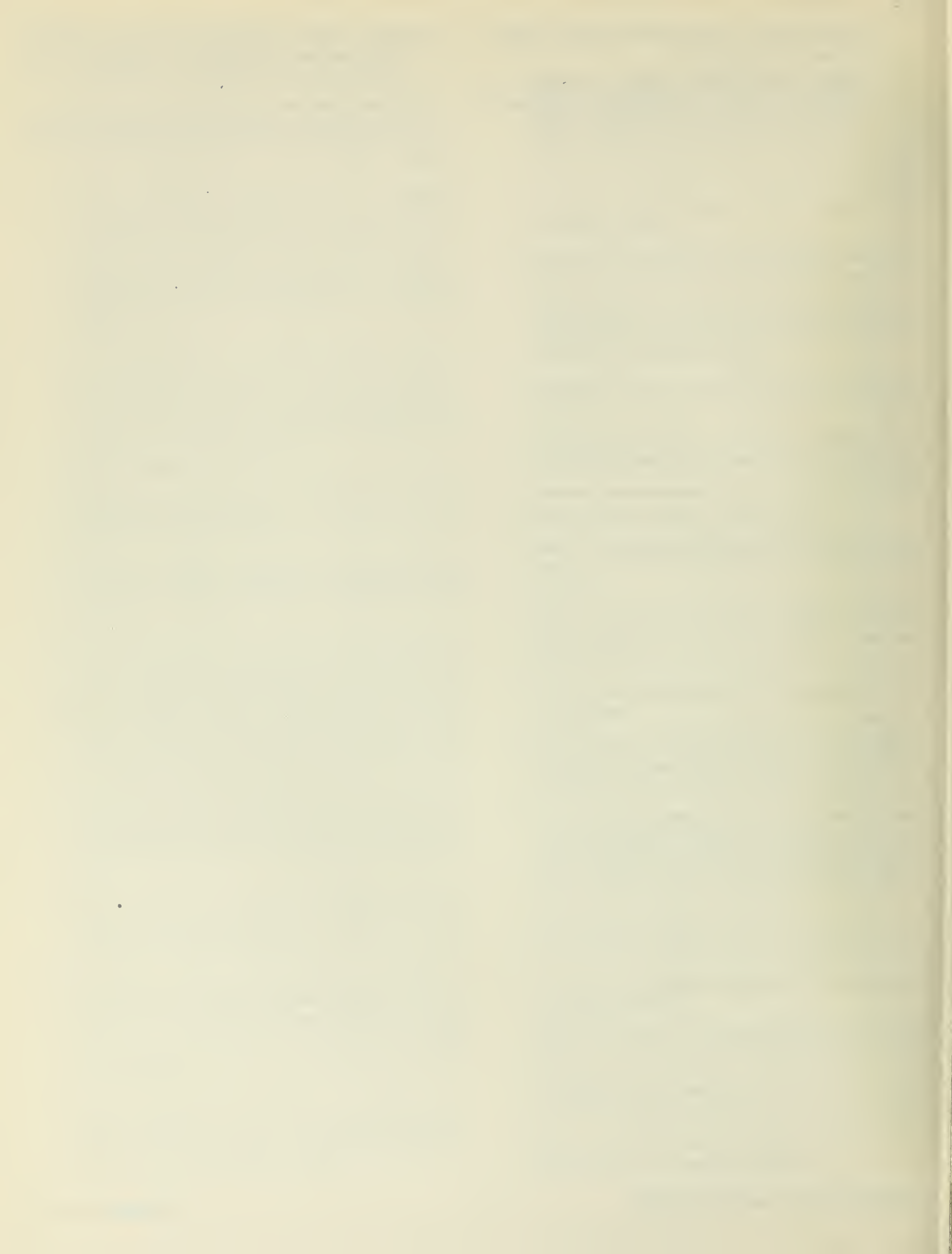
#### Nonbuilding construction:

- **Highways, streets and related work, such as installation of guardrails, highway signs, etc.**—Includes streets, roads, alleys, sidewalks, curbs and gutters, culverts, right-of-way drainage, erosion control and lighting. Also includes earthwork protective structures when used in connection with road improvements.
- **Outdoor swimming pools**—Includes wading pools and reflecting pools.
- **Recreational facilities**—Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Bridges and elevated highways**—Includes viaducts and overpasses; roads, highways, railroads, and causeways built on structural supports.
- **Tunnels**—Includes highway, pedestrian, and railroad tunnels.
- **Railroad construction**—Includes the construction of railroad beds, tracks, freight yards, and signal towers.
- **Subway construction**—Includes urban mass transit subway systems above or below ground.
- **Dam and reservoir construction**—Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Marine construction**—Includes dredging, underwater rock removal, breakwaters, navigational channels, jetties, and locks.
- **Harbor and port facilities**—Includes docks, piers, and wharves.
- **Conservation and development construction**—Includes land reclamation, irrigation projects, drainage canals, levees, and flood control projects.
- **Power and communication transmission lines, towers, and related facilities**—Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, electric light and power facilities.
- **Power plants, except nuclear**—Includes electric and steam generating plants.
- **Power plants, nuclear**—Includes atomic energy plants, and nuclear reactors.
- **Sewers, sewerlines, and related facilities**—Includes sanitary and storm sewers, and related facilities.
- **Sewage treatment plants**—Includes sewage treatment and waste disposal plants.
- **Water mains and related facilities**—Includes water supply systems and related facilities.



- **Water treatment plants**—Includes water filtration and water softening plants.
- **Pipeline construction other than sewer or waterlines**—Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.

- **Blast furnaces, petroleum refineries, chemical complexes, etc.**—Includes coke ovens, and mining appurtenances such as tipples and washeries.
- **Other nonbuilding construction**—Includes all types of nonbuilding construction, not included elsewhere.





## APPENDIX B.

### Standard Industrial Classification Titles for Industry Groups and Industries

| SIC<br>code | Industry titles  | SIC<br>code | Industry titles   |
|-------------|--|-------------|---|
| <b>15</b>   | <b>BUILDING CONSTRUCTION—GENERAL CONTRACTORS AND OPERATIVE BUILDERS</b>                      | <b>17</b>   | <b>CONSTRUCTION—SPECIAL TRADE CONTRACTORS—Con.</b>  |
| <b>152</b>  | <b>General Building Contractors—Residential Buildings</b>                                    | <b>173</b>  | <b>Electrical Work Special Trade Contractors</b>  |
| 1521        | General Contractors—Single-Family Houses   | 1731        | Electrical Work Special Trade Contractors   |
| 1522        | General Contractors—Residential Buildings, Other Than Single-Family                          | <b>174</b>  | <b>Masonry, Stone Work Tile Setting, and Plastering Special Trade Contractors</b>                   |
| <b>153</b>  | <b>Operative Builders</b>  | 1741        | Masonry, Stone Setting, and Other Stone Work Special Trade Contractors                              |
| 1531        | Operative Builders   | 1742        | Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors                      |
| <b>154</b>  | <b>General Building Contractors—Nonresidential Buildings</b>                                 | 1743        | Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors                                   |
| 1541        | General Contractors—Industrial Buildings and Warehouses                                      | <b>175</b>  | <b>Carpentry and Floor Work Special Trade Contractors</b>   |
| 1542        | General Contractors—Nonresidential Buildings, Other Than Industrial Buildings and Warehouses | 1751        | Carpentry Work Special Trade Contractors  |
| <b>16</b>   | <b>HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION—CONTRACTORS</b>                       | 1752        | Floor Laying and Other Floor Work Special Trade Contractors, Not Elsewhere Classified               |
| <b>161</b>  | <b>Highway and Street Construction, Except Elevated Highways</b>                             | <b>176</b>  | <b>Roofing, Siding, and Sheet Metal Work Special Trade Contractors</b>                              |
| 1611        | Highway and Street Construction Contractors, Except Elevated Highways                        | 1761        | Roofing, Siding, and Sheet Metal Work Special Trade Contractors                                     |
| <b>162</b>  | <b>Heavy Construction, Except Highway and Street Construction</b>                            | <b>177</b>  | <b>Concrete Work Special Trade Contractors</b>  |
| 1622        | Bridge, Tunnel, and Elevated Highway Construction Contractors                                | 1771        | Concrete Work Special Trade Contractors   |
| 1623        | Water, Sewer, Pipeline, and Communications and Powerline Construction                        | <b>178</b>  | <b>Water Well Drilling Special Trade Contractors</b>  |
| 1629        | Heavy Construction, Not Elsewhere Classified   | 1781        | Water Well Drilling Special Trade Contractors   |
| <b>17</b>   | <b>CONSTRUCTION—SPECIAL TRADE CONTRACTORS</b>  | <b>179</b>  | <b>Miscellaneous Special Trade Contractors</b>  |
| <b>171</b>  | <b>Plumbing, Heating, and Air-Conditioning Special Trade Contractors</b>                     | 1791        | Structural Steel Erection Special Trade Contractors   |
| 1711        | Plumbing, Heating, and Air-Conditioning Special Trade Contractors                            | 1793        | Glass and Glazing Work Special Trade Contractors  |
| <b>172</b>  | <b>Painting and Paper Hanging Special Trade Contractors</b>                                  | 1794        | Excavation Work Special Trade Contractors   |
| 1721        | Painting and Paper Hanging Special Trade Contractors   | 1795        | Wrecking and Demolition Work Special Trade Contractors  |
|             |  | 1796        | Installation or Erection of Building Equipment, Special Trade Contractors, Not Elsewhere Classified |
|             |  | 1799        | Special Trade Contractors, Not Elsewhere Classified   |
|             |  | <b>6552</b> | <b>LAND SUBDIVIDERS AND DEVELOPERS, EXCEPT CEMETERIES</b>   |





# **APPENDIX C.**

## **Geographic Divisions and States**

### **NEW ENGLAND STATES**

Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
Vermont

### **MIDDLE ATLANTIC STATES**

New Jersey  
New York  
Pennsylvania

### **EAST NORTH CENTRAL STATES**

Illinois  
Indiana  
Michigan  
Ohio  
Wisconsin

### **WEST NORTH CENTRAL STATES**

Iowa  
Kansas  
Minnesota  
Missouri  
Nebraska  
North Dakota  
South Dakota

### **SOUTH ATLANTIC STATES**

Delaware  
District of Columbia  
Florida  
Georgia  
Maryland

### **SOUTH ATLANTIC STATES—Con.**

North Carolina  
South Carolina  
Virginia  
West Virginia

### **EAST SOUTH CENTRAL STATES**

Alabama  
Kentucky  
Mississippi  
Tennessee

### **WEST SOUTH CENTRAL STATES**

Arkansas  
Louisiana  
Oklahoma  
Texas

### **MOUNTAIN STATES**

Arizona  
Colorado  
Idaho  
Montana  
Nevada  
New Mexico  
Utah  
Wyoming

### **PACIFIC STATES**

Alaska  
California  
Hawaii  
Oregon  
Washington



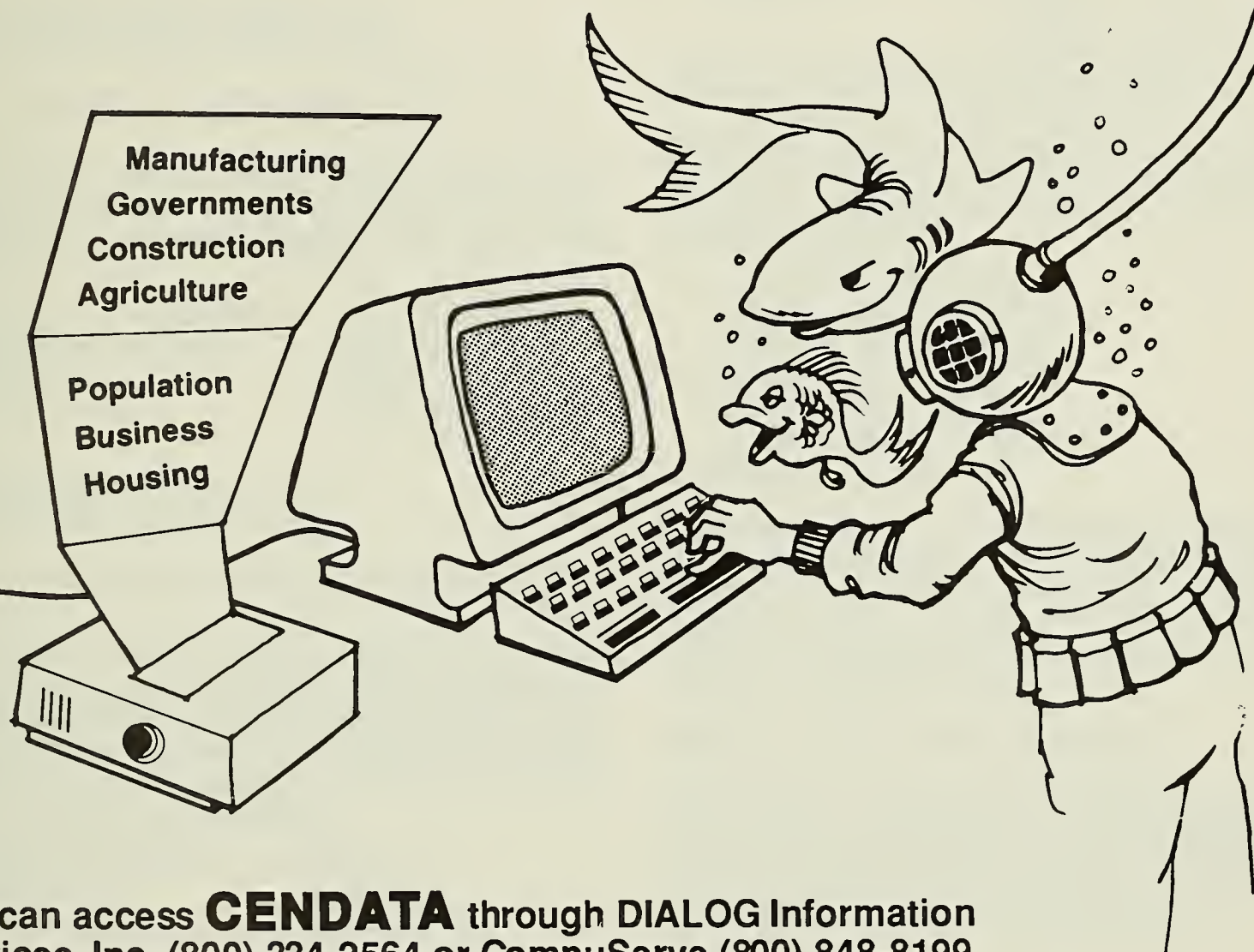


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The Census of Construction Industries is taken once every 5 years. The census covers all establishments engaged in construction, including:

- Building contractors
- Heavy construction contractors
- Special trade contractors (including plumbers, carpenters, painters, electricians)
- Land developers and subdividers

Data products in the Census of Construction Industries are issued in 4 publication series and in 3 other media:

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- CD-ROM [C]
- Computer tape [T]
- Highlights online [+]

## Preliminary Industry Series (CC87-I-1(P) through CC87-I-28(P))

(Available November 1988 through May 1989) [P]

Twenty-seven separate industry reports and a United States summary report, providing national statistics for establishments with payroll. Statistics shown for 1987 include:

- Number of establishments
- Number of employees
- Payroll
- Hours worked
- Value of construction work done, by type of structure
- Selected operating costs

## Final Industry Series (CC87-I-1 through CC87-I-28)

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Twenty-seven separate industry reports and a United States summary report, providing statistics for the Nation and individual States on establishments with payroll. These reports update figures from the preliminary industry series (employment, payroll, value of construction, etc.) and provide measures of the following:

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- Industry profiles
- Assets
- Depreciation
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- Payroll
- Value of construction work done
- Selected operating costs

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- Census of Service Industries
- Census of Transportation
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- Census of Mineral Industries
- Census of Construction

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